CAR CRAFT

FEBRUARY 1956
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Olds Engine in
'49-'51 Ford

INTERVIEWING "Von Dutch"
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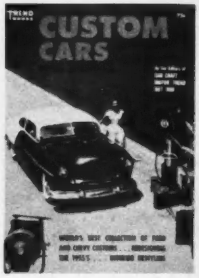

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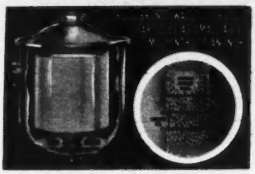

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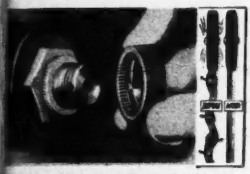

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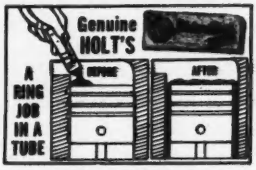

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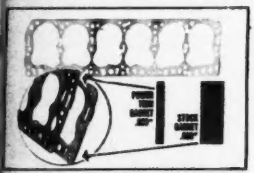

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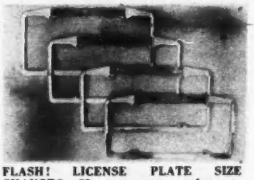

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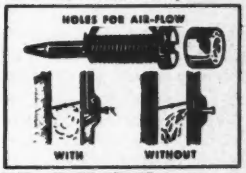

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TIRE TIPS

ALMOST ANY STOCK CAR can make a tire-screeching getaway, not to mention a car that has been well modified. In the former case, traction of the driving wheels may be a minor problem, while with a modified car, good traction is of paramount importance. We may spend months of time and hundreds of dollars getting an engine to perform in conformance to our wishes, only to find that the extra available power literally goes up in smoke at the rear wheels.

Ever wonder why race cars in the categories of midgets, sprinters and Indianapolis machines generally use larger tires on the driving wheels than on the front wheels? The answer is simple; better traction for the driving wheels and easier steering for the front wheels. With the most successful race cars, tire sizes are not arbitrarily chosen. Different sizes are tried until the correct combination is found and these are used until something is altered to change the car's balance, power, or both, at which time the tire-swapping gamut is run through again.

And so it is with stock or modified passenger cars. To get the best tractive effort under all normal conditions, which may include some drag strip activity, requires a bit of experimentation. The drive-in commandos, they of the ragged idle-big-boots-on-back-small-ones-on-front school think they have the problem solved. Don't believe it! In 99 cases out of 100, these cats are fooling themselves: This high rear end low front end routine is merely a fad, and one that doesn't have too much common sense behind it. But the one hundredth cat may be sharp enough to choose his tires to get the best results from them without regard for novelties.

With all things remaining equal, larger diameter tires on the rear wheels of a passenger car will shift the center of gravity forward, thus lowering the amount of torque that can be applied to the rear wheels before the "break loose" or start to spin. This shift in the center of gravity is in exactly the wrong direction. Chances are that better traction and improved acceleration times would be obtained by using *wider* tires of smaller diameter. The idea is to shift the c/g back as far as practicable, which isn't too far with

(continued on page 64)

CAR CRAFT

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The Show-How Magazine

Publisher.....R. E. Peterson
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cover

Start thumbing through the pages of this issue and when you get back to page 28, you'll see more of Bob Dofflow's beautiful '49 Ford custom with the '53 Olds engine being lowered away on the cover. The car itself will get more coverage in a later issue, this time we want to show you how the engine fits.

Ektachrome by Al Paloczy

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Words From The Editor

MENTION THE NAME "VON DUTCH" among a group of hot rod or custom car enthusiasts and you immediately have the floor. The words have a magical ring. Von Dutch is a young West Coast automobile striper who has cut a legendary mark across these United States, famous for turning out some of the wildest designs known to man with a striping brush. Conversation has it that he is just as weird as his imported Bavarian striping brushes made from Russian squirrel. Upon witnessing a few of his humorous moods, you become a believer. What we are building up to is that for all you readers who have not been afforded the experience of personally talking to this talented young artist, we are now giving you your chance.

Early last month we assigned our "ace" correspondent Jack Baldwin the task of personally interviewing the "Dutchman." Jack immediately donned his beret and artist smock nad, with a king size ball point palette knife, recorded one of the most humorous and interesting personality features that we have had the pleasure of setting in print. Practically living in Von Dutch's rear pants pocket for two days, Jack asked just about every conceivable question imaginable. The strange thing that Jack had to overcome was that Dutch's answers were just as imaginative. Baldwin, who hadn't been introduced to Dutch 'til time of the interview (are we ever dirty birds) stated that the whole affair ran very smoothly except for the untimely interruptions. It seems that every time the young artist would tire of the striping job he was performing, which was about every ten minutes according to Jack, he would leap upon his rusted out motorcycle, appropriately named "The Big Leak," and make like the "Terror of 101." If this didn't simmer his so-called fatigued nerves, he would then go into a relaxing pose, similar to a Yogi and commence softly playing his favorite musical instrument — the *flute!* This he does with the finesse of a Hindu snake charmer.

All in all, Baldwin says the experience was well worth the effort. He not only learned the fundamentals of striping a car, but he also discovered one of the "Seven Wonders of the World" — *Von Dutch the car striper!*

See what you think. The story appears on Page 22.

— dick day

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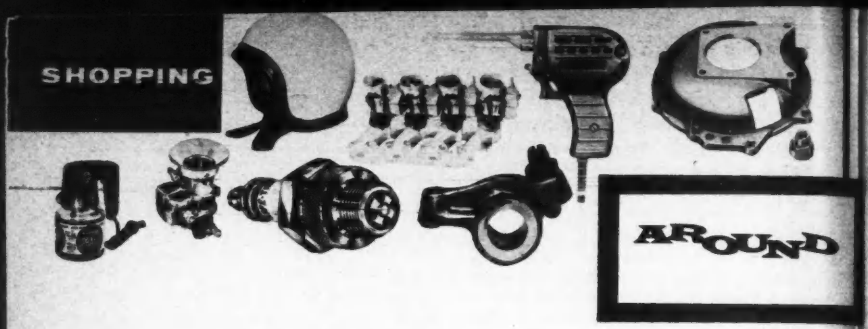
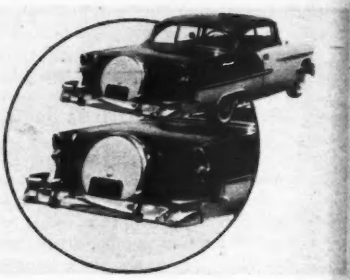
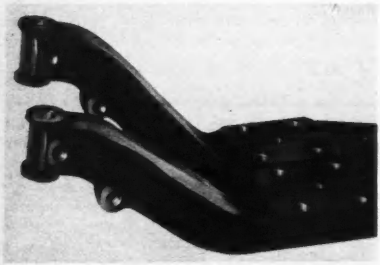


SPARE WHEEL KIT

The Continental spare wheel kit is available for Fords and Chevrolets from 1949 through 1955 models. The assemblies include solid tire cover face plate, finger-tip lock release lever, and cadmium plated parts. The custom model (above) has the tire rim in stainless steel rather than paint. Continental Industries, 3037 Riverside Dr., Los Angeles 39, California. Prices submitted upon request.





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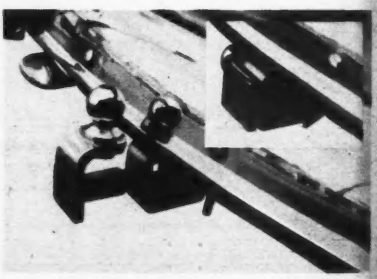

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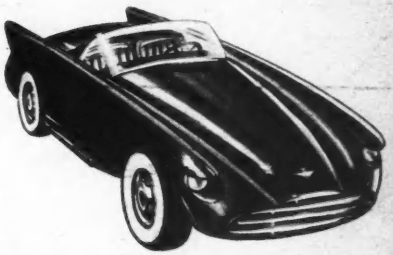

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A MESSAGE FROM SCHYSFER

Dear Sirs:

Just thought I would tell you how much I like your magazine, and also send a photo of my '48 Ford ragtop. It has had the following

changes made. Shaved hood, short side strips on hood, mild lowering job, Cad rims and false tire kit.

I sure like your magazine so keep it coming. Thank you ever so much.

Sincerely,
John Schysfer
R. D. No. 1
Millersburg, Ohio

Merci Beaucoup — Ed.

"NOW HEAR THIS"

Dear Sirs:

I have just finished reading the October issue of your fine magazine — and now I'd like to add my say to a few items. I think your series of "Body Restyles" is the best thing to ever hit car magazines. My favorite happens to be the popular and easily customized '51-'52 Chevrolets. I'm sure your readers would like to see some new ideas on these increasingly popular cars. I myself own a '51 convertible, and I am utilizing your fine step-by-step articles for my custom work.

Secondly, I have a reply to this Allan Roberts who seems to think we Easterners like gook wagons. He is misrepresenting the Eastern trend. We *do* have a lack of body shops here. So we do the next best thing — "do it yourself" when we want something done. We do not have full sets of tools, so we like what can be done with simple tools. In my book, the more step-by-step articles the better! I think you'll keep up the good work.

Sincerely,
Pat Moorman
Darien, Conn.

You'll be glad to hear Pat, that in the very near future we will present a complete step-by-step series on customizing the Chevy.— Ed.

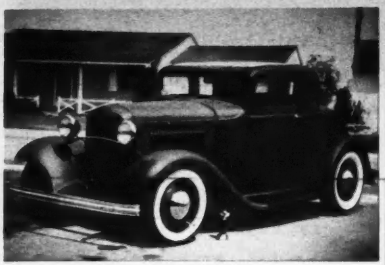
"FATHER AND SON COMBO"

Dear Sirs:

I would like to express my appreciation for CAR CRAFT and the other fine Trend magazines which I've been reading for a number of years.

While attending college in Provo, Utah, I bought a '32 Ford 5-window coupe which was in pretty sad shape, and had no body rust. Upon arriving in Los Angeles, the car was sandblasted, chopped 3 inches, and the body worked flawless. '41 Ford hydraulics, '39 trans, '50 Olds engine, dago axle, and some chrome work came next. Have installed seat belts and a roll bar and fire extinguisher are planned. Also the full route of custom interior, paint, striping, and detail are planned.

Enclosed is a picture of the car as it appeared in the Inglewood Custom Show in Sept., in which it received first place in the Father and Son class. A great deal of credit



goes to my father for his interest and long hours in helping to build the car.

J. Neal East
Los Angeles, Calif.

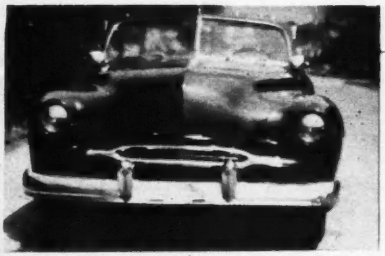
Sounds like you got a winning combination, Jay — Ed.

SEMI NEW YORKER

Dear Sirs:

I am a steady reader of your magazine and have taken most of my ideas on custom work out of it. It's the best. If possible I would appreciate seeing what work I've done so far in your next issue.

Enclosed is a picture of my '50 Merc, with '54 Pontiac grille bar molded to the fenders,



parking lights have been removed and filled, headlights and taillights are frenched and the finish is a metallic green. I intend to replace the motor and upholstery.

I'll be looking for your next issue.

Bob Hull
Albertson, New York.

Don't look, Bob — subscribe! — Ed.

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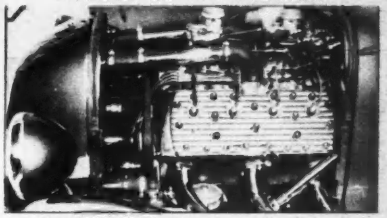

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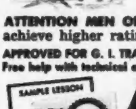

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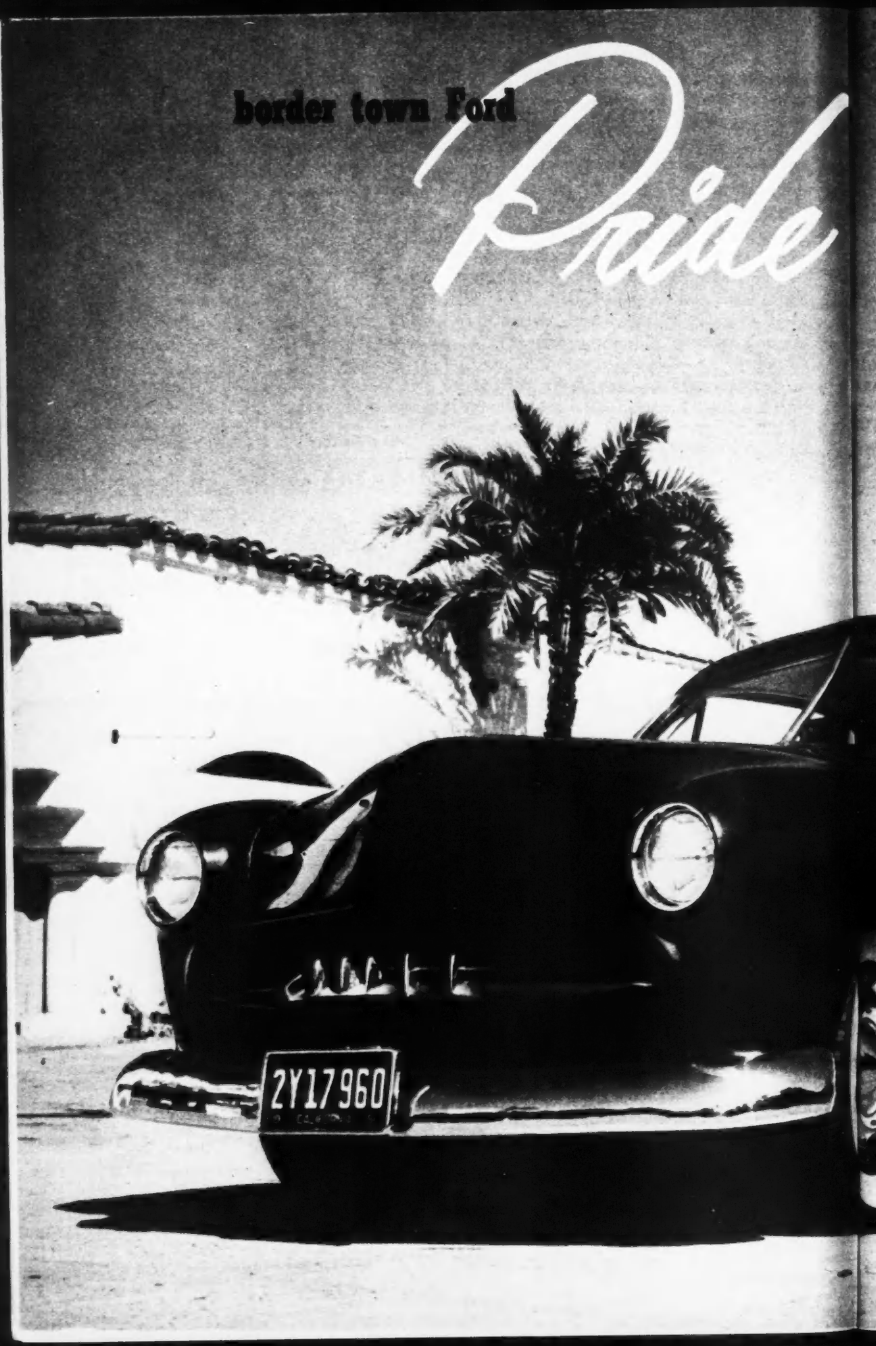

border town Ford
Pride
2Y17960

of the Plaza

THEY SAY THAT the "third time is a charm," and if you apply this backneyed phrase to the immaculate '50 Ford club coupe owned by Dick and Evelyn De La Cruz of San Diego, California, then a true story is in the making. Dick, who has been beating around cars for the past two years (he does his own body work), cut his teeth on a '24 "T" roadster way back when. Next four-wheeled item to appear in his enthusiastic years was a '40 Ford coupe and finally the natural charm — this flashy club coupe you see pictured on these pages.

He followed the same initial procedure that any other car builder does when first preparing his car for a custom title. All exterior chrome and trim was discarded, headlights were frenched to the fenders utilizing deep '53 Merc headlight rims, and a lowering job consisting of de-arched rear springs coupled with lowering blocks and a lowering kit

Photos by Bob Hardee

Pride of the Plaza

continued

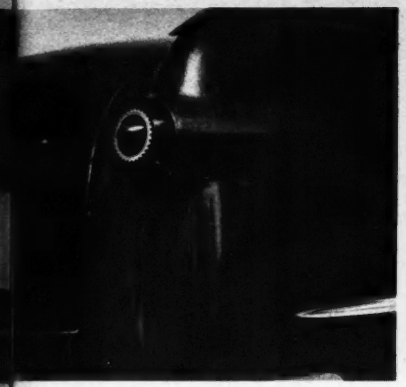
The exhaust system has been routed out through the bumper guards. The small grated windows allow exhaust to escape.

for the front suspension system. When it came time to design and build the grille, medium size tubing was first fitted to the opening, then welded solid and molded to the front body panels, offering a smooth cavity for the expressive single bar grille assembly that was to follow. The grille bar is comprised of a chrome accessory bar that has been reworked in the center to accomodate the specially made vertical teeth. Dick also rounded the forward hood corners and fashioned two small functional airscoops into the slightly peaked Ford's bonnet.

Separating the Ford coupe from its numerous other customized brothers of the same year are the taillights, the carefully blended '55 Buick side trim and the cleverly designed bumper guard exhaust system. Nestling in the enlarged tunneled taillight housings are '53 Olds lenses with their center sections removed. Ford synchro-mesh transmission gears are mounted around the openings with truck clearance light lenses filling in the reflectors. For side trim, two rear Buick fender spears were neatly blended together to give protection against careless door handlers and to serve as a conventional two-tone paint divider. Adapted in a low belt-line position, the trim helps to accentuate the car's low appearance. The exhaust system has been cleverly incorporated into each of the rear bumper guards. The tips are routed through the bumper into their individual guard. The guards themselves have a small grated window built in to allow the exhaust to escape.

Dick's last stop with the car was Riffle's Auto Upholstery Shop where the interior received a full compliment of yellow, white and gold rolls and pleats, plush bucket style

Dick and Evelyn's sharp '50 coupe is an eye catcher with its low silhouette and partial flame paint job. Gold metallic and flaked gold is exterior color combo.



The stock Ford taillight housings were enlarged to accommodate the '53 Olds lenses. Gear gogs are Ford synchro-mesh.

Two pieces of '55 Buick rear fender side trim has been neatly blended together just in front of the rear wheel openings.

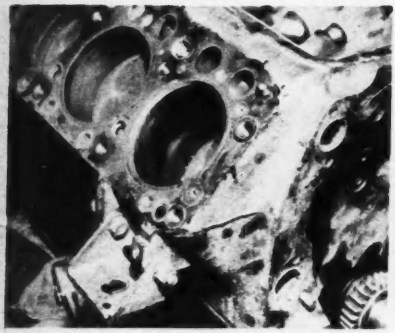
to harmonize with the two-tone gold exterior. When we asked Dick to expound a little on why he built the car he nonchalantly stated — "Just to have something to do in my spare time, I guess." He also commented that even though the car basically appears to be a member of the custom car fraternity it still is a true hot rod. He proved it by merely unlatching and lifting the hood where we took in the evidence. Squatting nicely in the Ford's engine compartment was a big fat '53 Olds powerplant — this could drive those emphatic oil checking service station attendants to drink!

Plush interior consists of three colors: yellow, white and gold. Note the design that has been incorporated into the rolls and pleasts. The Hydra-Matic transmission selector is position on floor next to the tunnel.

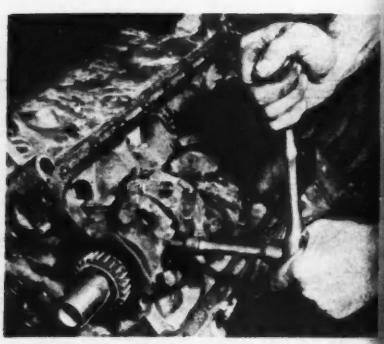
RING-IT

save money on new rings by doing it yourself — the right way

1. Ridge of metal and carbon at the top of each cylinder must be removed with a special reamer before taking pistons out. Care must be taken with reamer cutting tool setting.



2. This engine had almost .010 ledge at top of cylinder which was reamed clean.



3. After all cylinders have been reamed, remove rod nuts with box or socket wrench.

By Ray Brock

SINCE CAR CRAFT started covering stories on a step-by-step pictorial basis, the scope of our reader's requests has broadened considerably on the type of mechanical coverage they would like to see in our magazine.

These requests are not for complicated procedure as one might expect but almost all lean toward the basic operations of engine repair. From our incoming mail, we have come up with a problem which anybody who owns a car that uses oil and does their own work might eventually be faced with. How to ring an engine! That is the problem and on the following pages, we'll go through the whole job from start to finish.

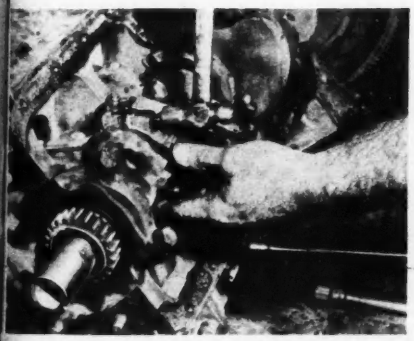
This job is usually done with the engine in the chassis but to simplify the picture taking chores, we chose a Chrysler V8 engine with all of the accessories stripped off and the block on a bench so that we could get the proper photographic angles. The steps used on this engine can be followed doing a ring job on whatever type car you might have. Grant Piston Ring Company of Los Angeles, furnished us with technical advice which we incorporate in this story and pass on to you.

The story starts with the cylinder head (or heads) removed and the piston tops in view. With a piston at the bottom of the cylinder, check that ridge at the top of the hole. It isn't all carbon like it might look, maximum wear occurs at the top of the cylinder. The first step is to remove that ridge of carbon and metal above the ring travel. This is necessary for several reasons. If the ridge is left, it can break rings as the pistons are removed, it can crack or break piston ring lands and if the new rings are installed without removing this ridge, the top compression ring would probably be broken the first time the engine was turned over. A special ridge reaming tool is needed to cut the wear ledge from each cylinder before the pistons are removed.

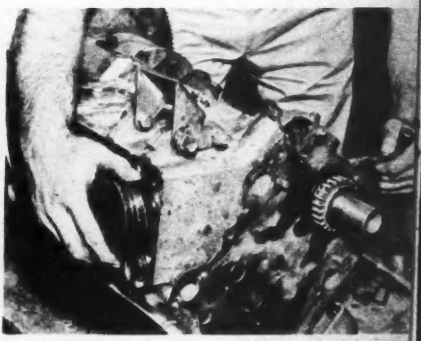
Next step, remove the pistons. Take the rod nuts off and tap the rod cap or bolt lightly with a small hammer to loosen the cap. Take the rod cap off being careful to save the insert unless you plan to install new ones. Remove the insert from the rod so that it won't be damaged in removing the piston and then use a long hammer handle or piece of wood to push the piston and rod up through the cylinder. Replace inserts in the positions you took them from. Before starting on succeeding pistons, replace the rod cap on the rod and make sure that the number stamped on each matches the cylinder that the piston came from. If not numbered, devise your own means of identification so that you can be sure you later return the pistons to the proper holes.

Removing the worn rings from the piston is an easy matter, they can either be removed whole or broken off. Watch yourself though, those rings can be mighty sharp. A piece of

(continued on page 60)



4. Light taps with a small hammer on rod bolt helps loosen the cap from the rod.



5. Use hammer handle to push piston and rod out. Don't let rod bolts hit throw.

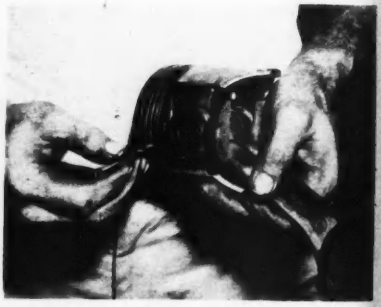
6. Before starting on other cylinders, put rod cap on rod to keep them matched.

7. Put piston in vise and remove the old rings. Watch edges of rings, they'll cut.

8. Good groove scraper and certainly the cheapest is a piece of an old piston ring.

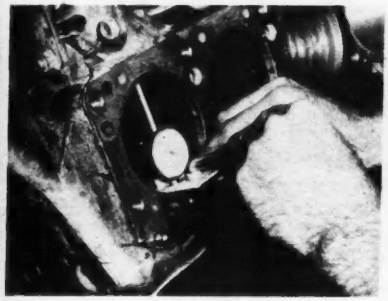
9. After grooves are cleaned, also scrape piston top to remove all carbon deposits.

10. Wire wheel or brush used lightly on piston help clean hard to reach places.



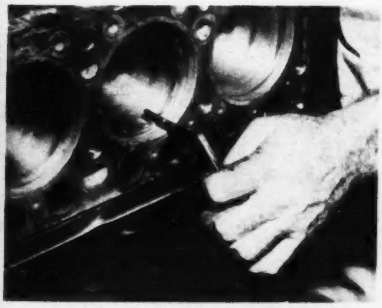
11. Pick a drill bit of the proper size and clean oil return holes in ring groove.

12. Cylinder hone with flexible shaft is used to "bust" glaze on cylinders and get proper finish for new rings to seat against. Kerosene or solvent should be used to lube hone.



13. Taper gauge is used to check cylinder wear, see if rings or rebore are needed.

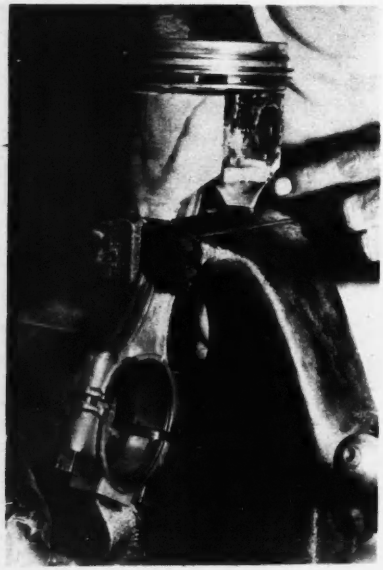
14. Check end gap by pushing ring down into the cylinder with inverted piston.



15. Use feeler gauge to check ring gap. Check ring at bottom of normal travel.

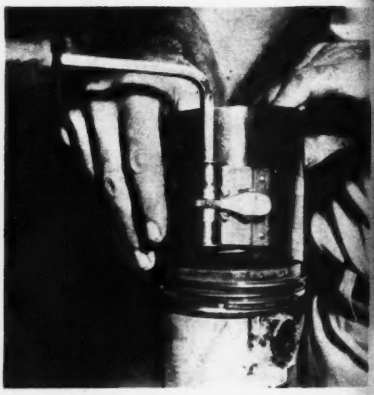
16. After checking rings in piston grooves for size, start installing from bottom up.

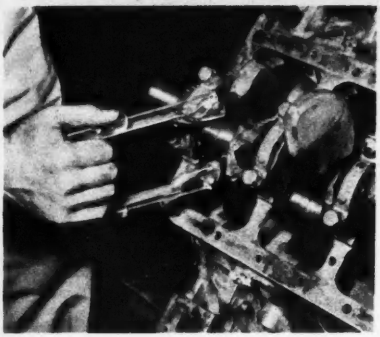
17. Take it easy when you spread the rings to slip over the piston, they can be broken. Be sure to check all rings for any identifying marks as to top and bottom before using.



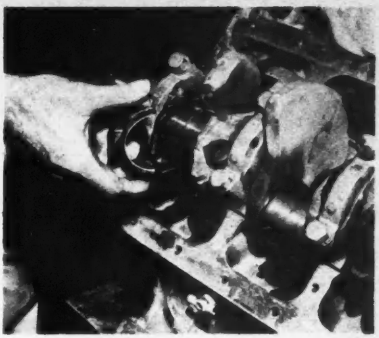
18. Piston is now fitted with new rings and ready to be put in proper cylinder.

19. After oiling piston and rings freely, clamp rings in grooves with a compressor.





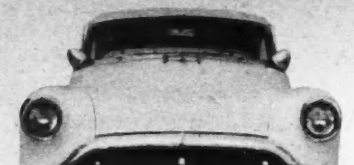
20. Special tools are available for guiding rod over throw but hand works as well.



21. Oil insert and slip car on rod with numbers on both matching on same side.

22. Last step and an important one is to torque the rod nuts to the correct tension. All specifications should be checked in a repair manual before reassembling the engine.

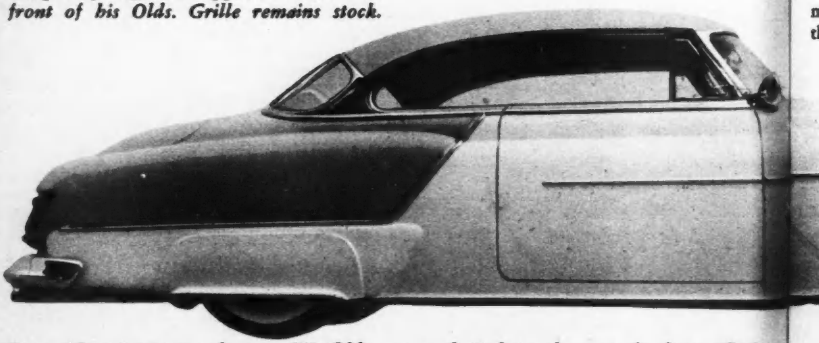
CUSTOM



minimum restyling pays off with the '52 Oldsmobile — especially when you approach it with the simplicity that Jim Garrett did

Photos by Joe Moore

By removing the Oldsmobile medallion from the hood and adapting the '55 Olds tilted headlight rims, Garrett achieved a completely different appearance for the front of his Olds. Grille remains stock.



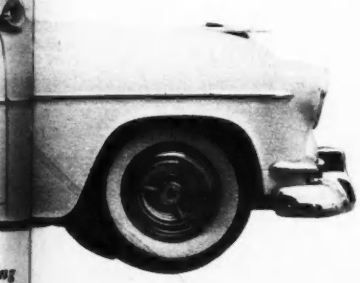
Rear side trim spears from a '53 Olds were adapted to the rear fenders, offering a division line for two-tone paint. Car has been lowered 3-inches both front and rear.

HOLIDAY

MANY CUSTOM CAR builders advocate that it's compulsory to revise every stock styling theme on a car when building a custom. This is far from being true, and Jim Garrett's sharp '52 Olds Holiday serves as exhibit "A". The car spent exactly three short weeks in Van Leeuwen's Custom Shop located in Artesia, California, undergoing its face lifting sessions. The strangest chapter of the story is, that only three components were actually restyled along with some very minor trim removal.

The first operation of the Olds' rejuvenation was removing some of the chrome exterior trim. The hood was partially dechromed, door handles were replaced with push buttons and electrical solenoid kits, and all deck lid goodies were discarded. The two items that definitely transposed the stock Oldsmobile's styling into a different breed were the tilted headlight rims that emanate from a '55 Olds, and the '55 Lincoln taillight lenses that were set into the rear fenders in an upside down position, sans directional light units. With two-tone painting in mind, Jim replaced the stock rear fender side trim pieces with trailing spears from a '53 Olds. This offered him the opportunity to employ the late side-trim-divided paint styling for his Capri blue and white paint job.

Garrett's custom treatment of the Olds points up one very important factor that every enthusiast should consider before hacking away at his car for the purpose of semi customizing. Success does not lie behind how many components you can change, but rather, the components you change them with.



The '55 Olds headlight rims accentuate needed length at the front of the car. Below, you can see how the '55 Lincoln taillights were neatly installed into the rear fenders in an upside down positions.

"are you Von Dutch the car striper?"

"THAT'S ME!"

BY JACK BALDWIN

"I'm Jack Baldwin of Car Craft Magazine. Mind if I ask you a few questions for a story?"

"Not at all Mr. Ballman, go ahead shoot."

"Baldwin!"

"Oh yeah, Baldwin. Shoot."

"Have you got more of a handle than 'Von Dutch' or is that the whole name?"

"That's it . . . 'Von Dutch'."

"How old are you Dutch?"

"Six Martian years, Mr. Balluoon!"

"Baldwin!"

"Oh yeah."

"Does the fact that you wear a flat-top haircut have anything to do with your job?"

"Sure, with a flat-top I can comb it with a towel. Naw, seriously though. I take the cut hair and make brushes to do custom painting on golf balls."

"How do you manage to keep from getting paint all over you?"

"I don't. It's mass hynosis. I'm not clean actually."

"Is this a special blend of paint you use?"

"Well, I'll tell you Mr. Bellman. The colored paint is Bulletin colors sign paint. The white is three brands thinned with a little 50 weight motor oil to give it the proper consistency. The white I use is WYLLES one stroke, Straight One Shot, and TW Single Stroke."

"What kind of brushes do you use?"

"They are imported from Bavaria. Made of Russian squirrel. I don't know what's the matter with American squirrels. Too squirrelly, I guess."

"You got any other trade secrets?"

"The biggest secret is to take your mistake and make it look like you did it on purpose. If I make a slip I go over to the other side and do the same thing."

"What do you do when you make a real boo-boo?"

"If I can't make it into something, off it comes. Sometimes I rub it off with a dry rag. But mostly I use my fingers. A rag is too fuzzy and leaves an uneven break in the line. It is cut off sharp when I use my fingers."

"How long have you been striping cars, Dutch?"

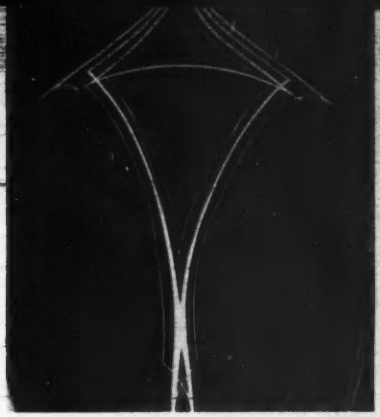
"I'll tell you Mr. Boleman . . ."

"Baldwin. B-A-L-D-W-I-N. Baldwin!"

"Sorry, Baldwin. I've been striping about the last 10 years professionally and about 20 years altogether for the kicks of it."

"Do you sign your jobs anywhere?"

"Sometimes, usually on the front or the



The nose of a dragster is a "Von Dutch" specialty. No pre-determined design is prepared, he just breaks out the striping brush and presto — an ornate design!

Radical striped crash helmets are becoming a big fad among competing drag race drivers. Car and helmet usually carry the same design motif — an original!

Dutch's striping can become very complex and tedious. An interesting item to notice is that the difficult design is duplicated to the degree on either side of the car.

CONTINUED

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back. I make tiny little letters that make it look like an imperfection. Then when people get up close to it they discover it's my name and they are real happy with themselves thinking they have discovered something."

"What do you charge for striping a car?"

"Flat six bucks an hour."

"Does that include drawing a picture or just striping?"

"A flat six bucks is hourl Drawing or painting, I don't care. A flat six bucks. I'll go 'til the guy tells me to stop."

"Did you ever eavesdrop on a crowd to listen what they say about your striping?"

"Oh, man yes, that's a favorite pastime of mine. Usually I like what they've got to say. But some make me blow my top. They say, 'Look at that guy's eyes, he must be a wineo. He can't be normal. No normal man could paint straight lines.'"

"Well can they?"

"Sure, if they take their time. Like I told you. The secret in striping is loading the brush right, not the striper."

"What advice can you give to a rodder or a custom car owner who might contemplate doing his own work?"

"Go ahead, give it a try. Most people, or I guess anyone who wants to, could learn to be a car striper if they just learn to load the brush right."

"How did you happen to get started striping cars and cycles?"

"Well, personal pleasure at first."

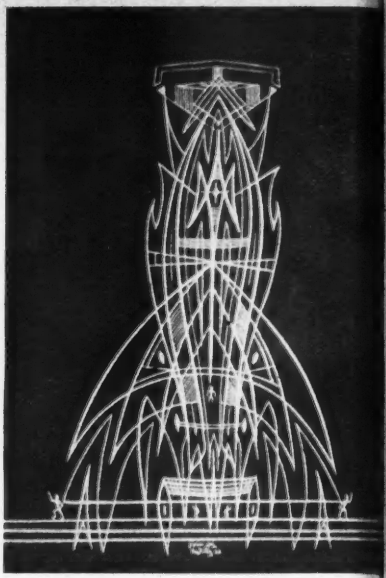
"Have you ever had any art training?"

"Nope."

"This striping, will it take polishing and weather?"

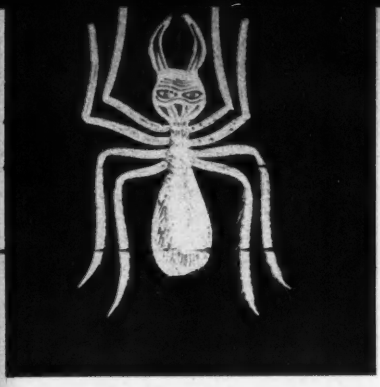
"Sure, as long as you keep a buffer off of it. You touch it with a buffer and phhoost — it's gone. Any striping will stick if the surface is good and clean."

"You'd make a pretty good tattooer. Ever tried it?"

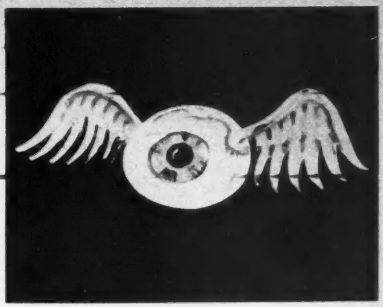


What did we say — "complex?" The funny thing about this particular design is that the more you look at it — the more you see. Note the small figures at the bottom.

Ah — now here's a bit of free-hand work that needs no explaining, at least not to Von Dutch. To decipher this little piece of hand work we'd need 444 pages.



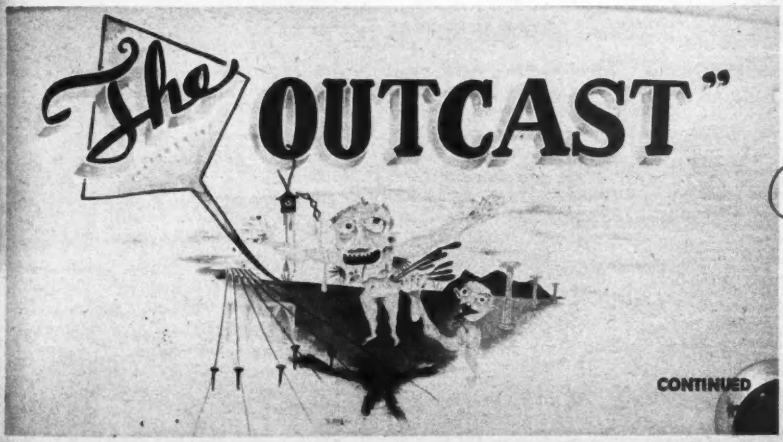
Dutch loves to paint the animal or insect bit on dashboards of cars. He says that the ideas for the species come about by observing the owner — well, that's the way it goes. Anybody got a mirror handy?



The "Flying Red Eyeball" is Von Dutch's trade mark. No one knows why — not even Dutch. Could be that it is the remainder of the famous World War II "ruptured duck" honorable discharge lapel button?

"Things just happen when I get going," explains Dutch. And we're not ones to contradict. Many of Von Dutch's renderings incorporate a small painting surrounded with ornate striping such as this.

The dragster "The Outcast" offers its competitors something to look at when going through the ¼-mile timing traps. The message is there, short and sweet, "Somebody is getting — booted out."



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"Sure, the old fashioned method. You know, with India ink and a straight needle."

"Do you have any self-inflicted tattooes?"

"Nope, not on me. Never liked anything so well that I wanted to carry it around with me for the rest of my life."

"Are your moods reflected in your work?"

"Definitely! The worse the condition, the better the job."

"Tell me, Von Dutch. Why stripe a car in the first place?"

"For the same reason a fellow puts on other goodies. For individualism. It helps cover up imperfections and distracts the eye from crude body joints. And it helps bring out good elements in design. Basically, it accents good features."

"Then you really think that striping a car adds something?"

"Sure! Modern automobiles need some human elements on them. Without it they look as though they had been ground out by a mechanical monster — which they have!"

"Do you think we will go back to the days when they turned out factory striped jobs?"

"Now, Mr. Balgan."

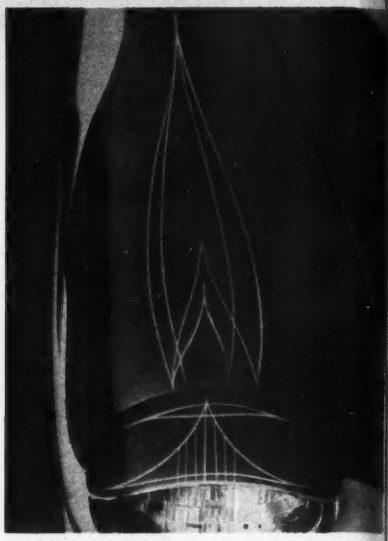
"Baldwin!"

"Oh yeah, Baldwin. Naw, I don't think so. You just can't go out and hire a guy and say, 'You're a car striper'. You can either stripe cars or you can't. Those that can are too unreliable. As for doing it with a machine it would be too static. There would be no human elements like I said."

"I was thinking that maybe I could do some of this to my car. What do you think?"

"Sure if you load the brush right. That's the secret — loading the brush right. The more paint on the brush, the wider the line. The less paint, the thinner the line. That's why I go through all this business of slopping the brush on a piece of cardboard. When you have to stop in the middle of a straight line, the knack is to load your brush with just the right amount of paint so that you can pick up the line again and have it the same width."

"What do you put down as profession or vocation when making out your income tax?"



Probably one of the most outstanding cars that has undergone Von Dutch striping is the Barris Brother's courtesy car — a '49 Ford station wagon. This is the headlight treatment, now check out the hood and side panels found on the opposite page.

"Professional bum. I just paint things."

"Do you paint anything besides customs or hot rods?"

"Oh sure! Radios, musical instruments and fancy boxes — anything! I even had a guy come in here one day with a Starfish he'd had in the family for years and paid me to stripe it. A Starfish!"

"Do you do much interior car painting?"

"Sure, about twenty-five percent of my work is done on dashboards and around radios."

"What kind of things do you paint?"

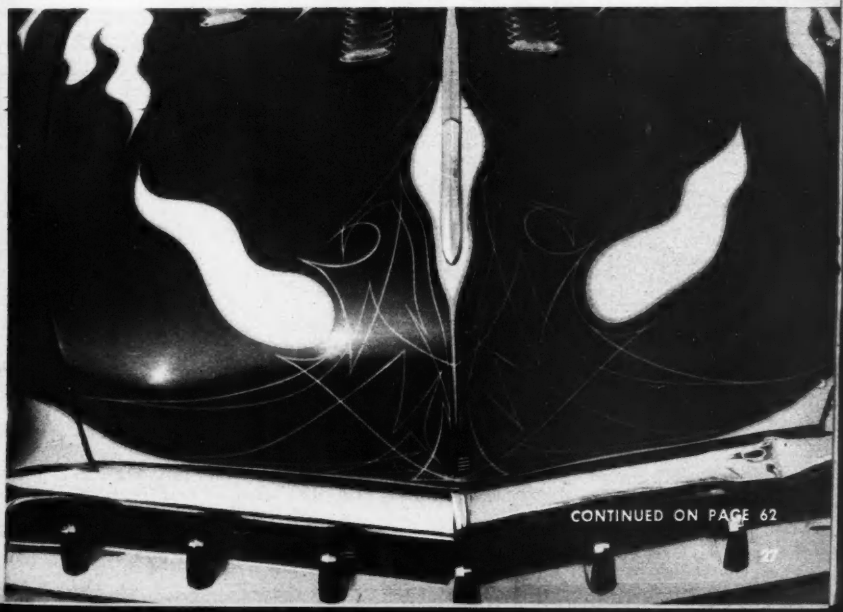
"Well I'll tell you Mr. Balcom . . ."

"Baldwin!"

"Yeah, Baldwin. I'll tell you. It depends somewhat upon what mood I'm in. Sometimes it is the car owner himself who suggests the scene. I don't mean he tells me what to paint but he reminds me of something. Like maybe the guy looks like a spider. So I paint a spider. Or maybe he reminds me of a crazy landscape. So I make a surrealistic. Sometimes I slap on an inner-planetary scene. Or maybe

Both sides of the station wagon carry a multi-colored abstract painting such as this. Dutch was given the word to go as far out as he wanted — and this he did masterfully. The painting tells the story of a man who eats a bowl of chop suey while walking through a valley of mountains contemplating a terrible suicide plot — understand? S-u-r-e we do! We won't go into the story behind the other rendering at this time. The hood below represents "The Unbroken Line" and it is if you study it. The line is definitely continuous. All you have to do is find where it starts.

(27)



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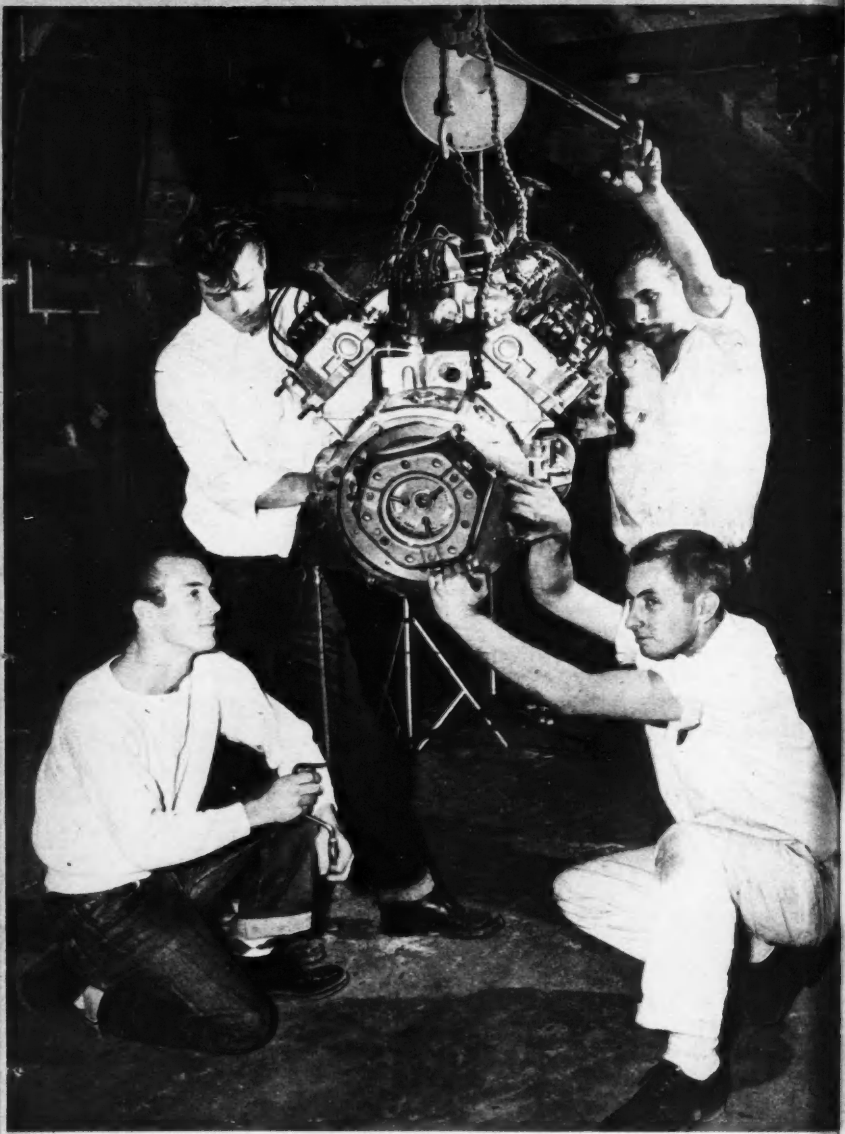


Bob Dofflow, standing left, and other members of Bear's Custom shop make final assembly of engine as they prepare to lower away into customized '49 Ford chassis for trial fi

ENGINE SWAP: ROCKET POWER FOR FORDS

popular Oldsmobile engine helps '49-'51 model Fords maintain pace

OLDSMOBILE brought out a new engine in 1949 which they dubbed a "Rocket." From 1949 to last year's '55 models, these engines jumped from 135 to 202 horsepower with no drastic changes except for twenty-one more cubic inches in 1954. As for the other changes through the years, cam timing, carburetion, port sizes, valve sizes, compression raises, etc., all of these things can be applied to the early model "Rocket" engines.

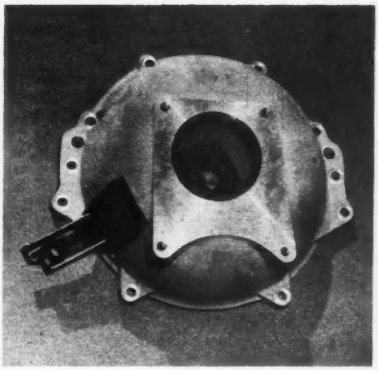
The fact that early engines can be brought up to late horsepower ratings with stock parts plus the fact that a little extra can be easily obtained with a few pieces of speed equipment has made these overhead valve V8 Oldsmobile engines probably the most popular when it comes to engine swaps in other type chassis'. Another determining factor is the availability of "Rocket" engines, which is very good because a lot of Oldsmobiles have been built since 1949.

A popular conversion all over the country is the Olds-in-a-Ford switch which we show on these four pages. The car belongs to Bob Dofflow of Whittier, California and the installation was made by Bear's Custom Shop of Inglewood. It adds that nice finishing horsepower touch to a '49-'51 Ford.

CONTINUED

Photos by Paloczy, Rickman

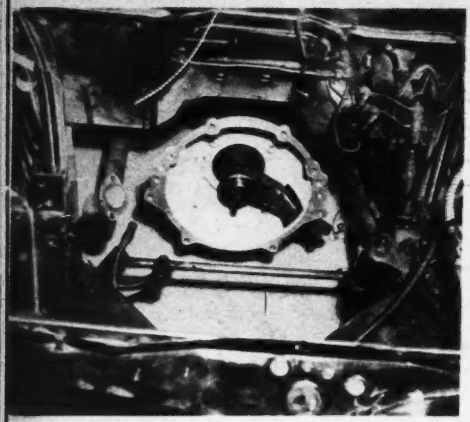
Ford 10 inch clutch disc and pressure plate was used but '53 Oldsmobile flywheel had to be re-drilled. Early Olds 6-volt starter, Ford generator was used on 12-volt engine.



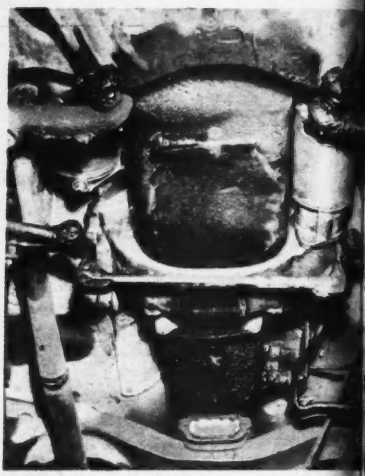
Cyclone adapter fits between Olds engine and Ford transmission, uses Ford clutch release arm and throwout bearing. Pilot bearing adaptor is also included in kit.

ENGINE SWAP:

continued

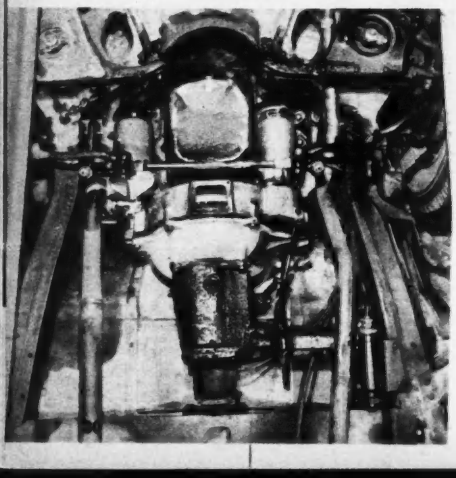


Adaptor in position on Ford transmissi... Several tight spots encountered in engi... swap are visible including steering g... box, steering cross shaft between pitm... and idler arms and shift linkage whi... interferes with left head in some ca...

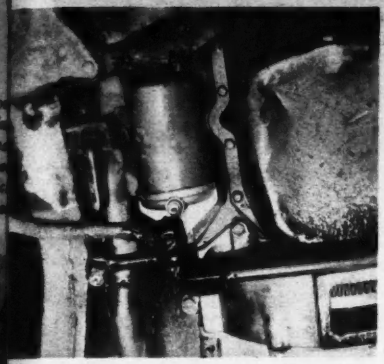


Right, bottom view shows how center piece in steering linkage was dropped to clear Olds oil pan. This can be a possible dangerous weak spot unless extreme care is taken, strong gussets welded into the offset link. Total drop is about two inches.

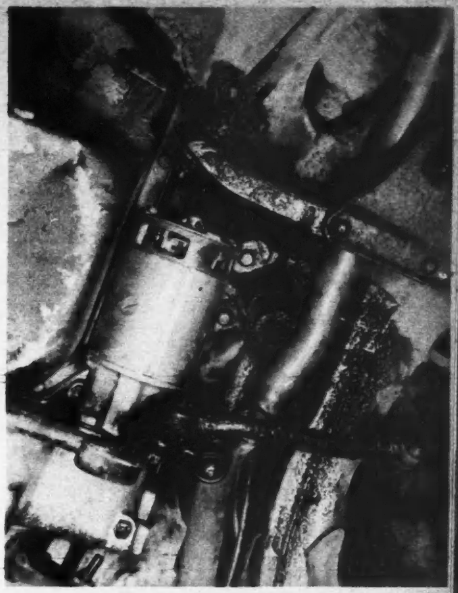
Below, view from under car shows finished installation and exhaust routing. Note that engine is off center to right of car a full inch due to starter, steering gear closeness. Slight offset of engine does not create problem with an open driveshaft.



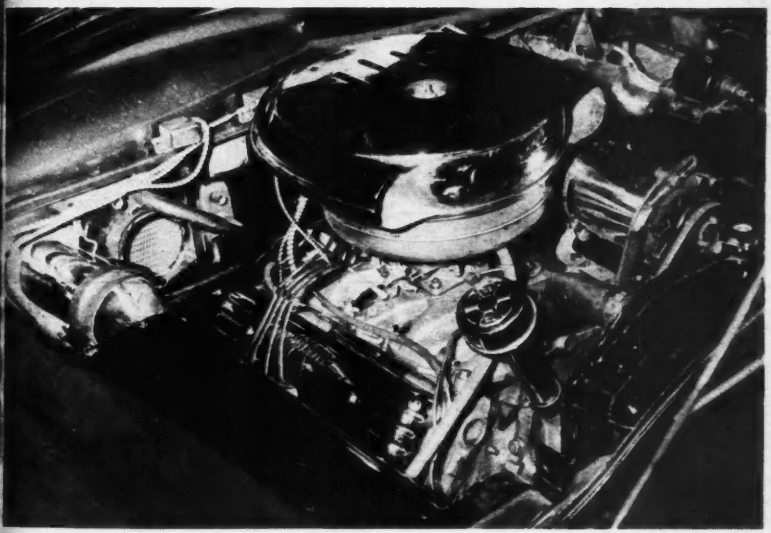
Heavy plate was formed to fit between th... stock Ford engine mounts and bolts o... timing chain housing. Olds center mount... was also used to rest on frame and suppor... major part of weight. Fabricated mount... are principally for stabilizing the engi...



Olds oil filter in stock position has plenty of clearance on right side of engine as does the exhaust head pipe from the stock manifold going back to the dual system.



Right, big problem lies on left side of engine where starter motor, steering gear and exhaust from special left side header come close together. Disc grinder was used to trim excess off of steering box, exhaust routed beneath suspension A arm.

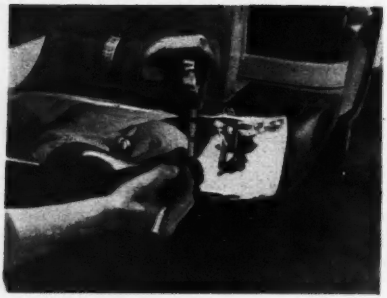


Completed installation. Generator is from Ford six to fit on top of engine instead of off to side in conventional Olds position. Heater blower fan was removed to get clearance for right rocker cover. Sheet metal adaptor will be used to re-install the fan.

BUMPER TIP EXHAUST

CUSTOM STYLE

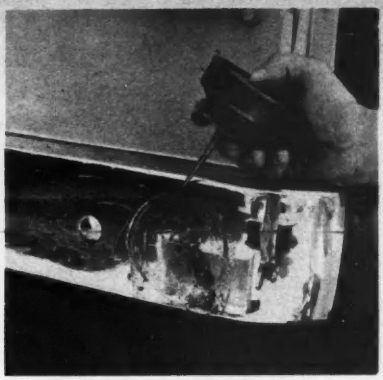
LIKE ALL PHASES of customizing, bumper tip exhaust styling has its own separate department. We have featured many of the past aprpoaches for this particular item but, like all creative fields, new ideas appear. A clever example that came to our attention recently was one that the Barris Brothers turned out on a late Ford pickup utilizing fender trim (portholes) from a '55 Buick. To duplicate the operation for your car, all that is required for tools is a 3½-inch diameter hole saw and drill. It must be remembered that the Buick's round porthole has a flat face, and that the bumper's surface must be equally flat, or the match between bumper and tip will be far from correct. Many of the late model car bumpers are such that they will accommodate the tip's flat contours and, of course, pickup bumpers are naturals.



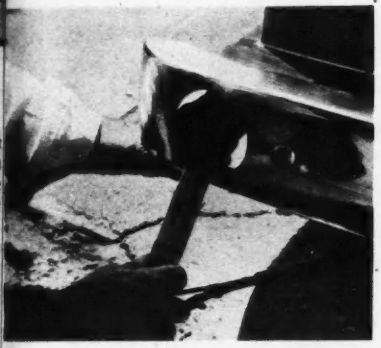
1. First, determine position of tips. Check bracket clearance behind bumper.

2. After marking off where tips are to be positioned, center punch the bumper.

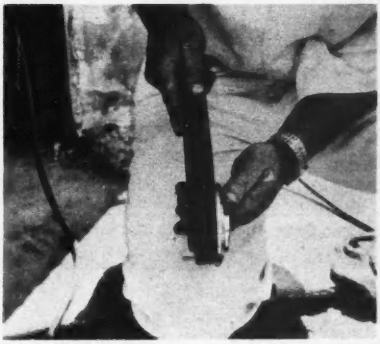
3. 3½-inch diameter hole saw is used with heavy duty drill to cut holes in bumper.



4. While cutting holes, apply oil to bumper, this assures a clean and smooth cut.

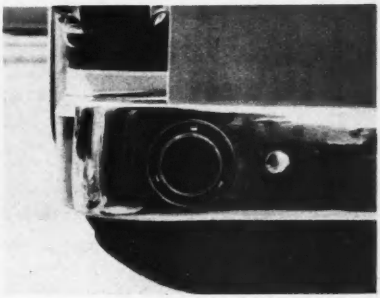


5. After plug is removed from the bumper, a hand file is employed to file edges.



6. You will find two small protrusions on Buick portholes, file these down flush.

7. Tips can be welded directly to exhaust pipes or secured to bumper with brackets.

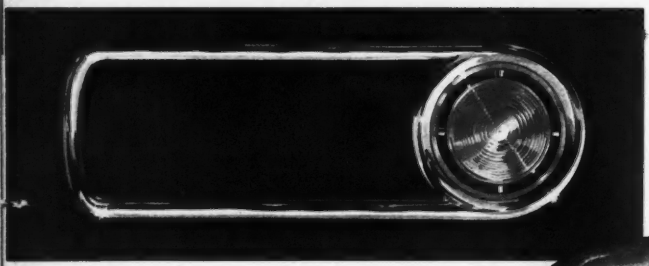


8. Buick porthole (fender trim) fits flush offering a unique exhaust tip.

HAMLIN'S BODY SHOP

RESTYLES

Vaun Hamlin



Above you see pictured the neat and functional nerf bar bumpers that were fabricated from round rod and then chromed. Each nerf bar is designed to encircle the '53 Chevy parking lights and the '48 Pontiac taillights. As you can see the nerfs are positioned at each protective corner of the body. They are attached to the old reworked stock bumper brackets.

THE '46-'48 CHEVROLET

WHEN WE ASKED Vaun Hamlin how he became interested in the custom and hot rod sport — enough so that he has operated his own custom body shop in Bridgeville, Pennsylvania, for the past five years — he drew in a deep breath and quietly stated, "Well, it's hard to determine just how things come about and my case is no exception. While in high school I used to work part time for a body and welding shop here in my home town. I pick up quite a few pointers and after graduating from school I went to work for a local Ford agency. While working for the agency I chanced to meet a young man by the name of Jimmy Summers from California, who showed me several pictures of cars that he had customized while operating his own body shop out there. I was so impressed with the appearance of the customized cars that I think it was right there that I started removing chrome instead of loading it on. A few years later I opened by own shop and that's the way it has remained right up 'til now."

Vaun's proud contributions to the custom and hot rod field are two cars that have stood out as trophy winners up and down the east coast. One is a '50 Ford convertible which will be featured in Car Craft in the near future and the other an immaculate '32 Ford that is channeled and has all the trimmings. Both have confiscated their share of auto show awards for their area. For you readers who have written in for information regarding locations for eastern custom body shops, then Vaun's shop should be jotted down in your address book. He welcomes all inquiries. Write: Hamlin's Custom Shop, 1215 Washington Pike, Bridgeville, Pennsylvania.

Illustrations by Don Fell

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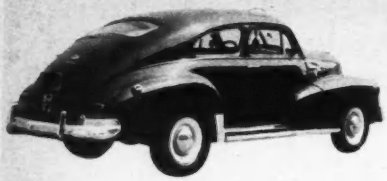
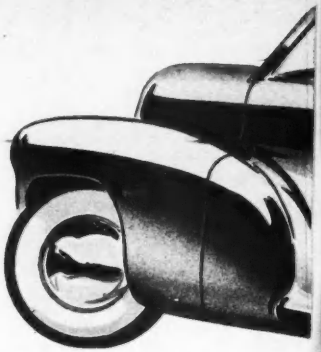




Hamlin's DeVille type styling is a very interesting treatment for this model Chevy. Another innovation, that of removing the bumpers and extending the lower edge of the body down both fore and aft, augments car's low contoured appearance. Note exhaust tip arrangement. Only chrome accessory left on the car are the small gravel shields on rear fenders.

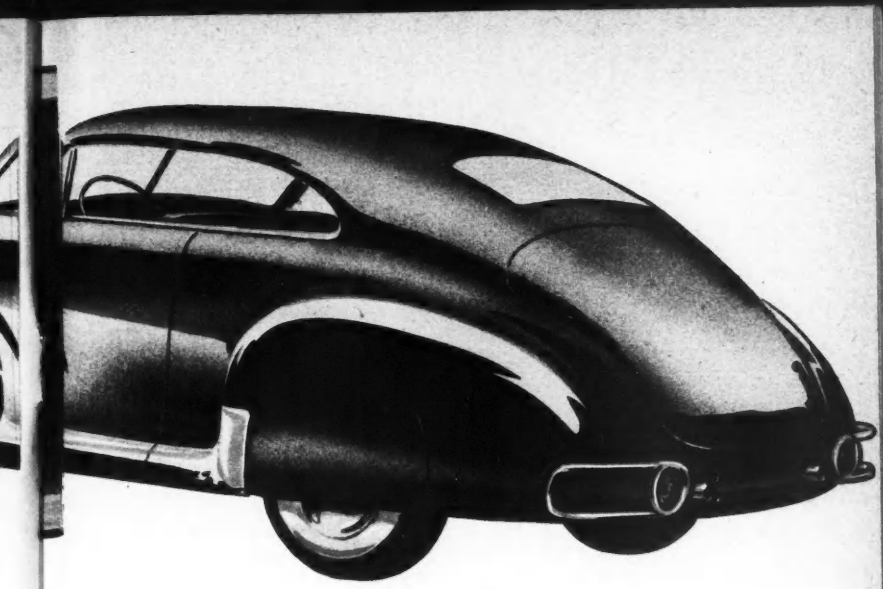
SINCE THE DAY they rolled from the assembly lines the '46-'48 Chevrolet Fleetline sedans have been very popular items with custom car builders. Vaun Hamlin, this month's custom stylist, has uncovered the basic potential of this particular body style with the following innovations. Largest appearance alteration that Hamlin performed was to chop the top two inches, reslanting the windshield posts and removing the center door posts offering later DeVille type styling. Strength lost in removing the door posts was counteracted by re-inforcing the top along the edges with metal straps and in the rear quarter paneling with a similar arrangement. The frame was also beefed up to compensate for any loss of strength to the body structure of the car. By removing the front and rear bumpers, also the individual gravel pans, and extending the body panels down farther, much was accomplished in making the body appear lower to the ground. To replace protection in the vulnerable areas, Vaun improvised small nerf type bumpers made from bar stock and installed them at the crucial protective points. Each nerfing bar's design is such that it frames both the '48 Pontiac taillights and the '53 Chevrolet parking lights.

The oblong shaped grille assembly emanates from a '54 Nash. The front of the Chev's hood required modification, that of matching the grille's top bar. Sheet metal was used to blank off the front body panels around the grille assembly. Stock headlight rims were frenched to the fenders, completely eliminating all small chrome accessories from the front of the car.

The lower chrome rocker moulding has been reomved. The stock body roll that the rocker panel attaches to has been extended down to break even with the lower front and rear fender line. Notice also that this roll has been smoothly molded into both fender corners. All exterior chrome trim has been discarded and all body and fender seams filled to accentuate that smooth, solid appearance. With door and deck lid handles removed, latch mechanisms are actuated with electrical push button systems.

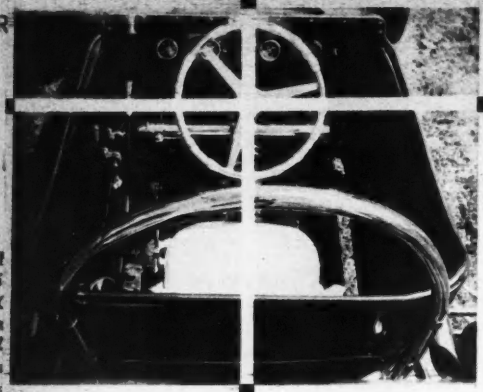
When it came time to decide on what lowering methods to employ, Vaun went the conservative route. Each front suspension assembly was dropped two inches by adapting a conventional front end lowering kit. At the rear end, to insure a satisfactory boulevard ride, the frame was "C'd" and three-inch standard lowering blocks were installed. The accessory items, such as the full moon hubcaps and fender skirts, are equipment which can be purchased from any leading automotive accessory store.

Like all custom cars, Hamlin's treatment of the Chevy sedan is made up of many innovations that could easily be transplanted into other body styles — even other makes. He has offered what we consider an ultimate approach to restyling this particular model proving that eastern body shops are very capable with — *the custom car.*



PARTS AND PRICE LIST

	LABOR	PARTS
Chop top, remove door posts and door tops	$ 500.00	....
Convert door and rear quarter windows	200.00	....
Reinforce frame and rear quarter panels	125.00	....
Fill door handles, alter rocker panels, add metal to lower door edge, and install electric solenoids	160.00	19.95
Shave deck lid, round corners, install solenoid	62.00	9.95
Weld and mold rear fenders to body and front fender extensions to the doors	60.00	....
Extend lower trunk panel, recess license plate, taillights, and route exhaust tips	110.00	10.48
Nose hood, round and snub hood to match grille	100.00	....
French headlights	40.00	....
Install '54 Nash grille, sheet metal under grille	200.00	60.50
Install '53 Chevy parking lights	20.00	8.86
Build nerf bumpers, plating, and installation	145.00	....
Lower front end 2-inches	75.00	....
Lower rear end 3-inches, C frame, install rubber bumpers	35.00	7.00
Rear fender skirts		18.00
Full moon hub caps		19.95
Lacquer finish	175.00	....
	$2007.00	154.69
	154.69	
	$2161.69	



CENTER STEERING

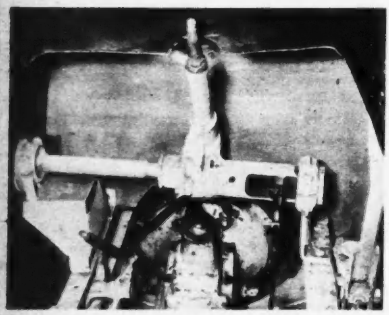
a must for nearly all types of competition machinery with four wheels

Photos by Rickman

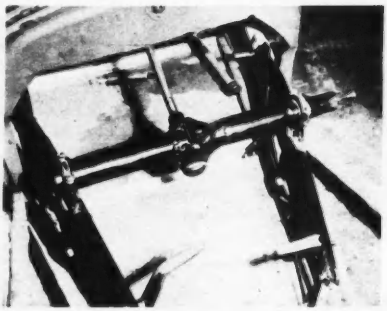
ONE OF THE prime requisites on competition cars is an adequate means of pointing the car in the direction you want to go. With a stock car or one which is designed for straightaway use only, problems aren't too varied but what about a car which is used on a track or one which is rapid on acceleration with a tendency to skate around a bit? These cars have to be fitted with a "quick" steering ratio so that a slight turn on the steering wheel will mean an immediate and positive change of direction.

The need for a fast acting steering and the fact that most competition cars have the driver's seat located in the middle of the car for better balance and vision has brought a big demand for center steering units. Midgets, sprint cars and big time race cars have been using the "quick" center steering units for years but for the most part, they were a high priced, lightweight unit which backyard mechanics could not afford.

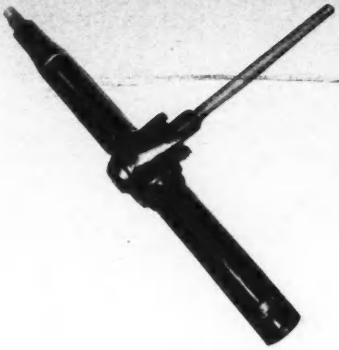
Since they couldn't meet the price of the professional units, a lot of the boys started making their own. The best suited steering box from a stock car which could be con-



Dragster center steering was made from a Franklin unit, has a ratio of six to one.

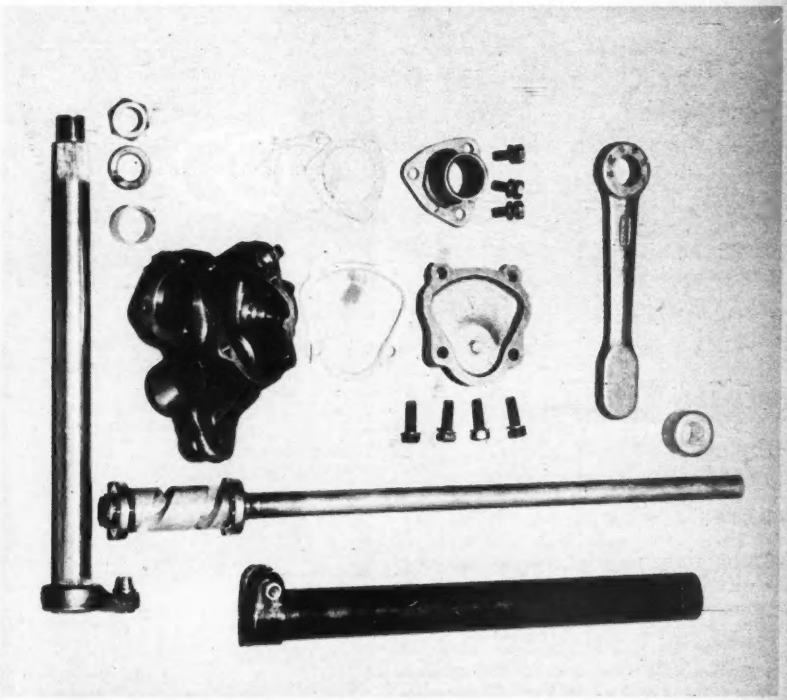


Modified roadster uses steering from '40 Merc with shaft lengthened, lays on side.



Another view of modified Merc steering shows how support tube was welded to box.

New, low priced center steering gears. Small one is 6:1, large gear is 12:1.



Completely disassembled 6:1 ratio gear can be put together with ½ inch wrench.

CONTINUED

Column and cam unit with ball bearings in place is dropped into cast iron housing.

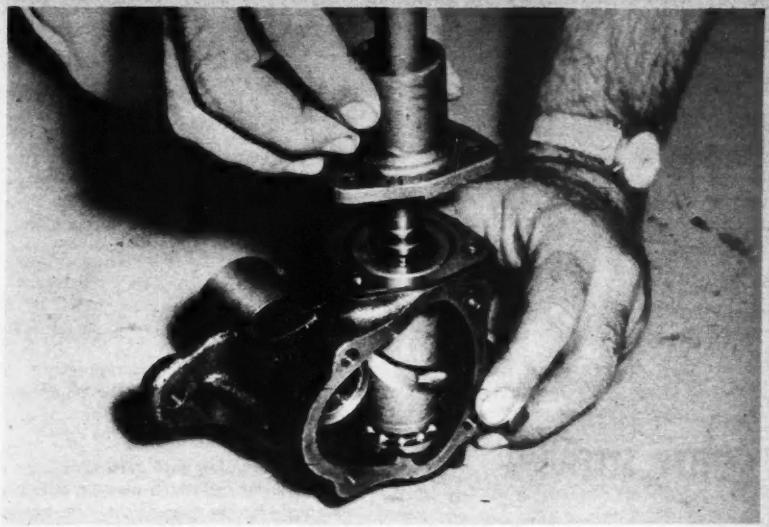
Assortment of shims is used to get proper spacing and correct tension on bearings.

CENTER STEERING

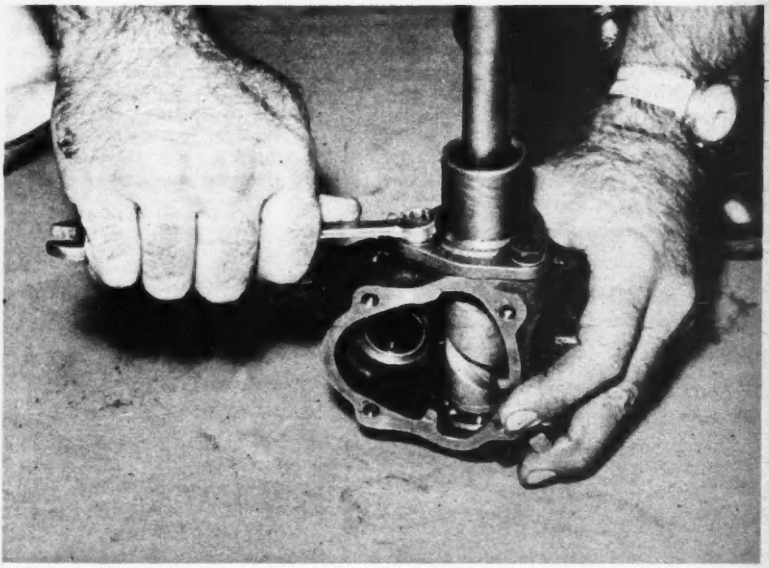
continued

verted for use in a race car was the Franklin unit. There were two ratios in the Franklin cars, one a 6:1 and the other an 8:1 ratio as compared to most stock gear ratios of around 16:1. The big drawback in using Franklin steering boxes for conversion to center type was the fact that a lot of machine work was needed to lengthen the cross shaft plus the fact that Franklin cars were last produced in 1934 and therefore steering gears were sometimes hard to find. As for parts, they were next to impossible.

It is possible to convert later steerings such



After cover is in place, column should be checked for end play. Adjust with shims.



Upper cover is dropped into place over shims, bolted down with three cap screws.

CONTINUED

Cross shaft is next. Hardened lever stud rides in steep angle steering cam groove.

Cross shaft adjusting screw is in side cover plate, rides against end of shaft.

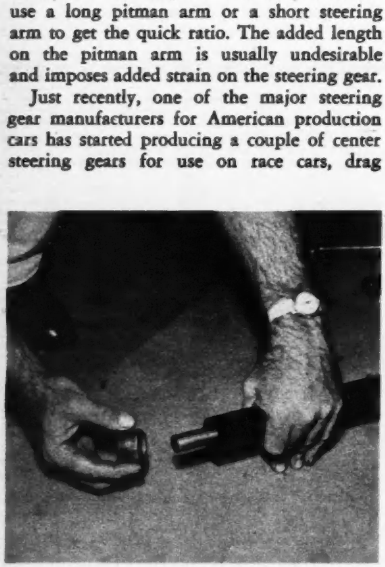
CENTER STEERING

continued

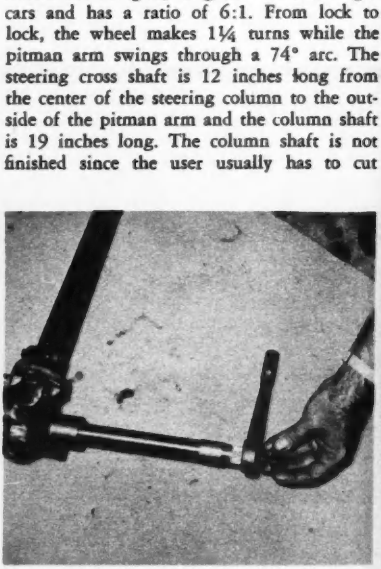
as Ford to center steering but a lot of machine work is needed to lengthen the sector shaft, etc., for the switch. Even after the conversion is made, it is necessary to either use a long pitman arm or a short steering arm to get the quick ratio. The added length on the pitman arm is usually undesirable and imposes added strain on the steering gear.

Just recently, one of the major steering gear manufacturers for American production cars has started producing a couple of center steering gears for use on race cars, drag machines, modified stock cars, jalopies or any other type of car which needs a fast, center mounted steering. One of the most attractive features of these gears is that they are reasonably priced.

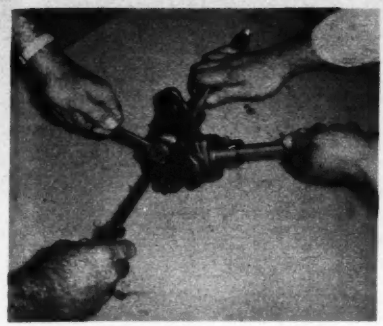
The smaller model S12 gear is ideally suited for midgets, dragsters or other light cars and has a ratio of 6:1. From lock to lock, the wheel makes 1¼ turns while the pitman arm swings through a 74° arc. The steering cross shaft is 12 inches long from the center of the steering column to the outside of the pitman arm and the column shaft is 19 inches long. The column shaft is not finished since the user usually has to cut



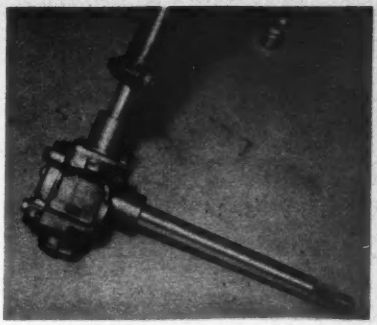
Bushing is provided to hold column centered in jacket. Column must be machined.



Blank pitman arm and nut are also provided to fit on tapered spline cross shaft.



Cross shaft is easily adjusted. Final adjustment should be after installing on car.



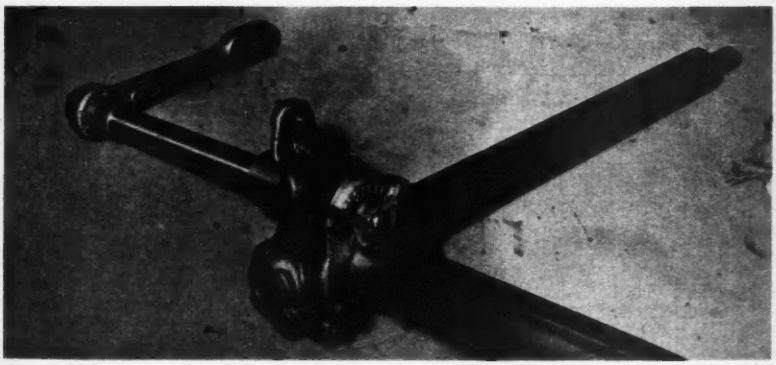
Steering column jacket is slipped over top cover, can be cut to the desired length.

the column to fit his particular needs. When the length is determined, the column must be machined to fit the steering wheel.

The larger gear is more suitable for heavier cars such as a modified stock car or an Indianapolis type car. As a matter of fact, one of these model 140 gears was used on the car which Bob Sweikert drove to victory in the 1955 Indianapolis '500'. It has a 12:1 steering ratio, is bigger and stronger, and the steering wheel makes 2⅔ turns from lock to lock while the pitman arm swings through an 80° arc. The cross shaft is 13 inches long and the steering column is 34 inches long. This column also must be finished to the required length.

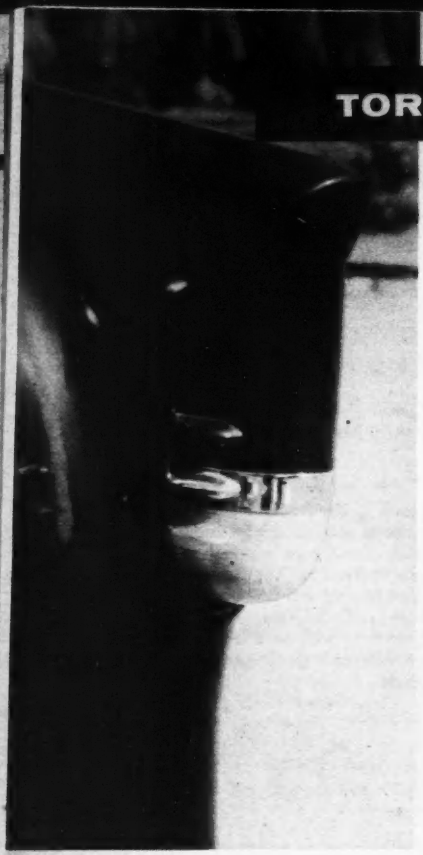
Both gear assemblies include pitman arms with blank ends which can be bored to fit any application. The S12 comes with a seven inch pitman arm and the 140 gear has a nine inch arm. Steering column jackets are included as well as bushings for the steering column and the outboard end of the cross shaft.

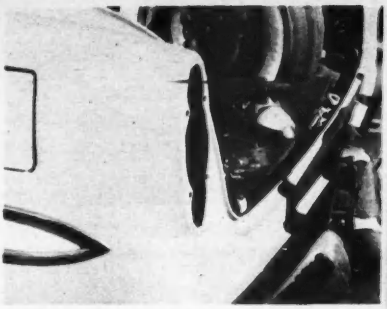
These center steering units are available through C-T Automotive, 6926 Lankershim, North Hollywood, California. The price for the S12 is $75 list and for the model 140, $125 list. Garage and jobber inquiries are invited.



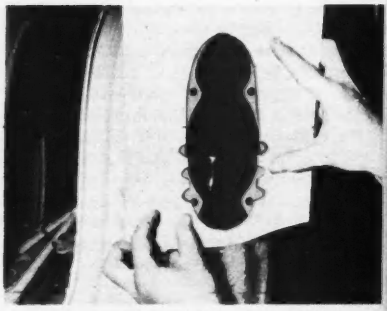
Mounting tabs are cast into housing to provide a means of anchoring to chassis but a piece of tubing may be welded to side plate and used as an alternate mounting method.

TORCH TIPS:

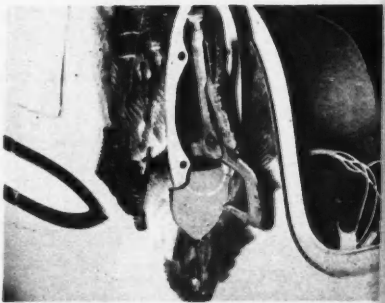




1. First step consists of removing the complete taillight assembly from fender.



4. Make template of Merc lens. Holding it up to fender, alterations are determined.

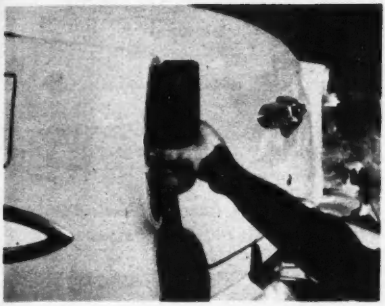


7. Opening is filled with sheet metal, trimmed at dotted line, aligning with lens.

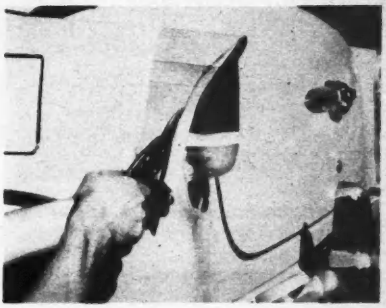
Text and Photos by Gene Windfield

A BRAND NEW BODY SHOP makes its contribution to our "Torch Tip" department this month — Gene Windfield's productive custom shop of Modesto, California, lends us a neat restyling caper for the '53 Chevrolet. Gene's step-by-step photo story concerns itself with replacing the Chev's stock taillights with those from a '55 Mercury station wagon. A shaded or lipped effect is also incorporated into the rear fenders keeping with the latest styling trends. The '55 Merc station wagon taillight lens is one of those components that we all will be seeing a lot of in forthcoming months. Its design, shape and size is such, that it makes for easy installation into all narrow fender styles of '49-'52 model cars.

a hot item with custom car builders is the new '55 Mercury station wagon taillight lens. Here — '53 Chevy gets the treatment

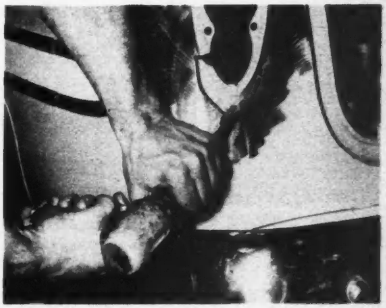


2. Next, the '55 Merc station wagon lens is checked out for correct alignment.

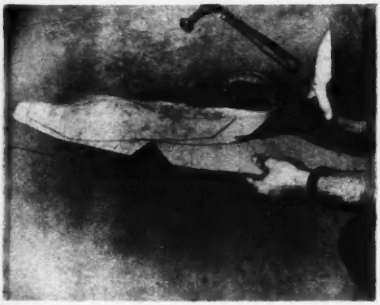


3. Lens is held in position with masking tape; cardboard shade template is made.

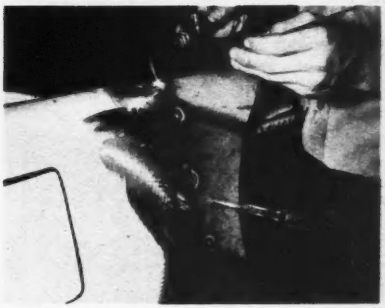
5. Cut fender to align with lens' pattern. Small notches are cut with a hand file.



6. Being Merc lens is smaller than opening, lower section of opening is removed.



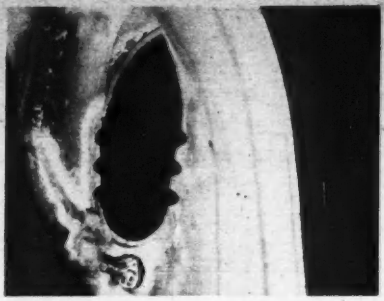
8. Shade template made in step #3 is now traced off on sheet metal and cut out.



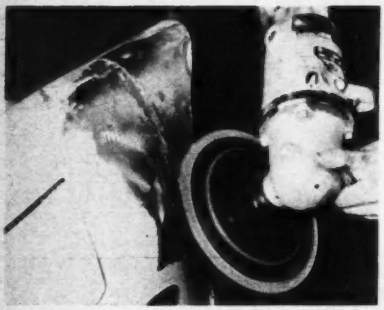
9. Sheet metal shade is formed over the top of the fender and welded into place.

CONTINUED

10. After shade is secured, ⅜-in. tubing is formed and welded to edge of shade.

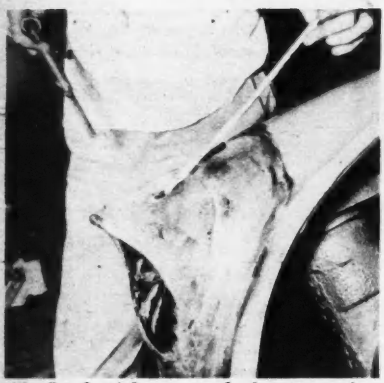


11. Attachment bolts are welded to inside panel of fender for securing light unit.



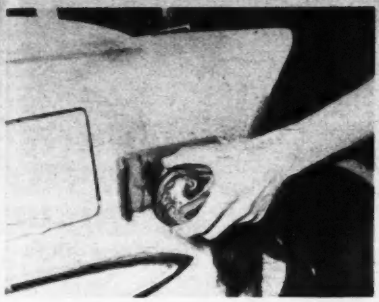
12. With taillight fabrication completed, grind area thoroughly, cleaning welds.

13. Surface is now tinned using a small steel wool pad and soft torch flame.

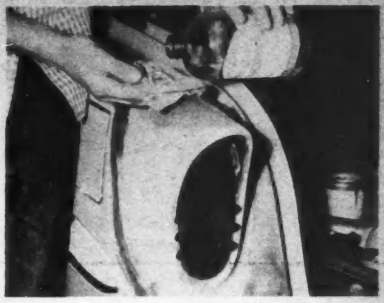


14. Lead sticks are melted onto surface and spread about evenly with lead paddle.

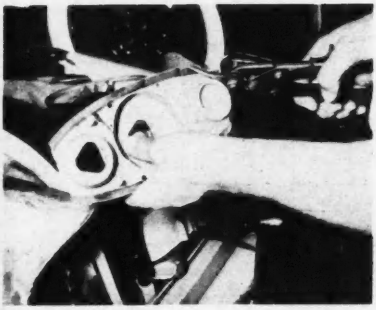
15. After cooling, complete area is worked smooth by hand filing with vixen file.



16. Bare metal is now completely sanded and old paint edges are featheredged.



17. Clean bare metal with metal prep solution wiping surface dry immediately.

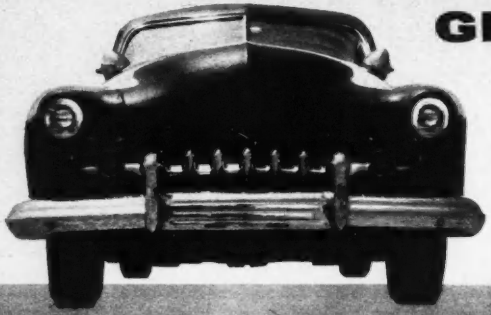


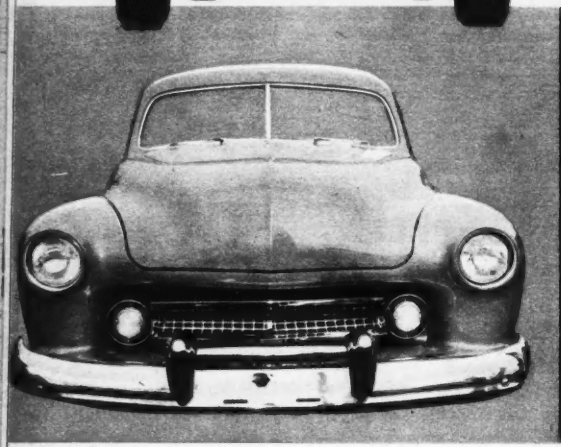
18. Chev taillight backing plates need minor trimming, they bolt in from rear.

19. Prime fender, blocksand with 220 sandpaper (wet), then apply finish paint.

GRAB BAG

'49-'51 MERCURY GRILLE STYLING





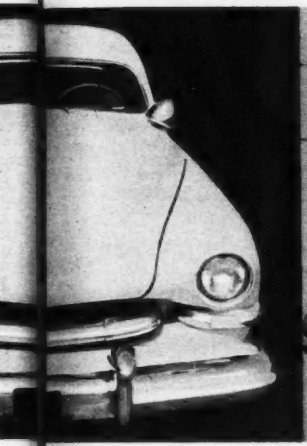
ABOVE, TOP. The Merc grille shell's large asset is that it will accommodate complete grille assemblies from other makes of cars. Here is '54 DeSoto.

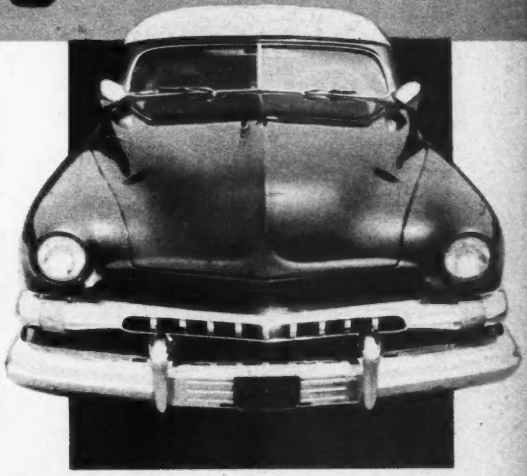
ABOVE. '55 Ford checkered grille pieces add a foreign flavor to Merc's front grille cavity. Parking lights, spliced into grille, are from '53 Chevy.

RIGHT. This straight bar is comprised of a '51 Plymouth center piece, while end sections containing the parking lights emanate from small Henry J.

Photos by D'Olivo, Barris, Rickman, Moore

WHEN SPEAKING OF natural customizing components – non can approach the '49-'51 Mercury's grille shell. The front grille panelling of the Merc, which is referred to as a grille shell, is so simple, yet custom designed, that it can be grafted on to almost any late model car, lending a neat rounded oval frame for any type of grille bar assembly. Its customizing utility is self explanatory when once noticing its stock rolled and tucked contours. As for what type of grille bar assembly fits the shell best – there is no set pattern. The straight "floating" type grille has proven most popular, but on the other hand many customizers have utilized large grille assemblies with minimum modifications. The following illustrative photos are slanted toward the '49-'51 custom enthusiasts, but any of these ideas could easily be transplanted into other makes of cars by merely grafting and molding on this same Merc grille shell.





CENTER. A difficult grille to build, but one with a dramatic appearance, is this center bar and parking lights made up of '51 Ford grille components.

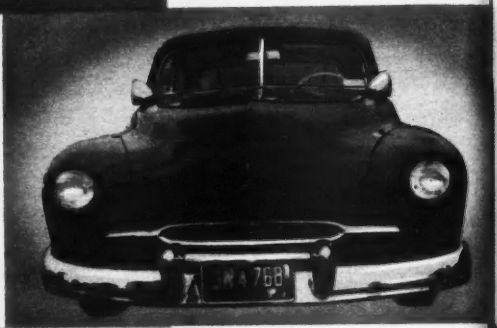
UPPER RIGHT. This simple V'd center bar was constructed from 18-gauge sheet metal. The parking lights fixed to the ends of the bar are from '50 Cadillac.

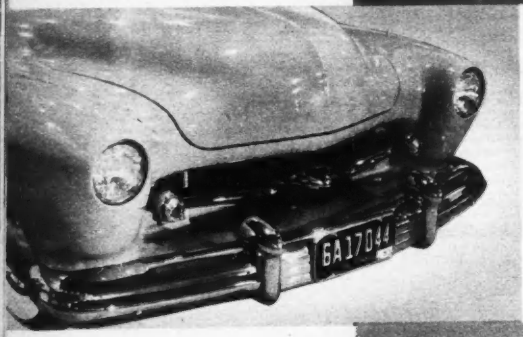
RIGHT. Special center bar has been contoured into stock park lights. Center piece has ¼-in. round rod welded to opening to give heavy, smooth appearance.

CONTINUED

LEFT. The '53 Oldsmobile grille bar is easily adapted to the merc grille opening. End sections have been made into parking lights.

RIGHT. The '54 Pontiac grille bar is easily spliced into Merc's inner grille panels, lending a bold appearance for a floating type bar.



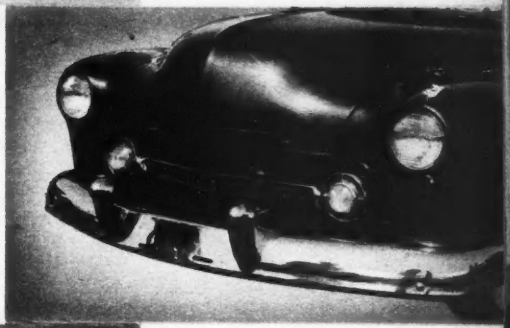


LEFT. A novel appearance is gained by splicing two '51 Frazer grille end pieces to an extra large bullet shaped spinner.

RIGHT. Here is '53 Chevy grille installation utilizing the complete grille assembly. Note that park lights have been converted to fog lights.

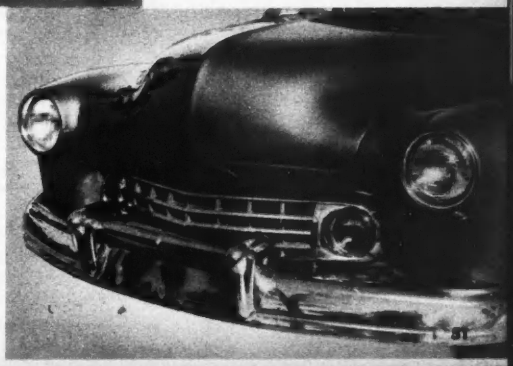
LEFT. Here, popular accessory bar serves as center piece with end ornaments originating from '51 Studebaker.

RIGHT. Two '52 Ford grille bars were welded together to make this center piece. Parking lights fixed to ends are from '53 Chevrolet.



LEFT. This '53 Chevy grille bar has been V'd to match the Merc grille's contour. The park lights and the vertical bar are also '53 Chevrolet.

RIGHT. The lower grille section from a '48 Lincoln Continental fits nicely into the Merc's grille area. End lights are fog units.



By Ray Brock

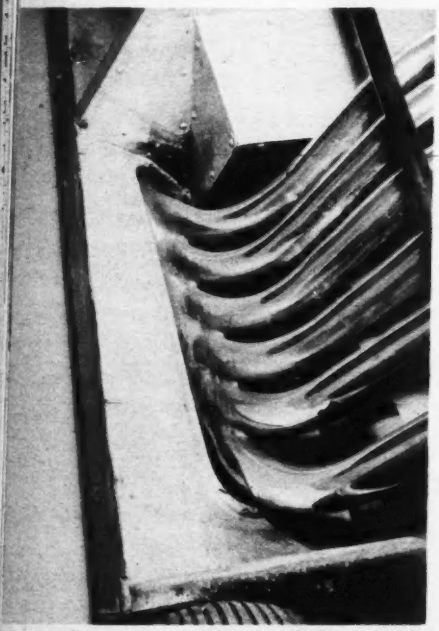
Photos by Rickman

Drawings by Fell

BUILDING A

PART V

showing how to provide mounts and braces for the finished body

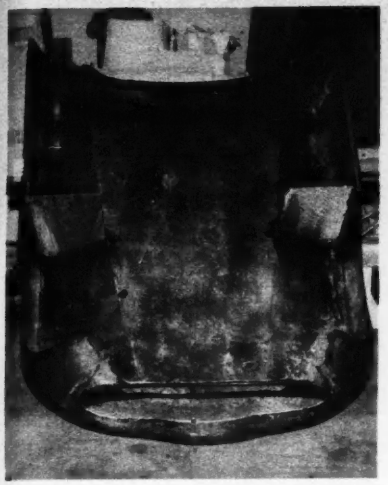


All openings in fiberglass bodies must be finished, not left raw. This bead around header is glass covered small hemp rope.

IF YOU HAVE BEEN following the past four issues of CAR CRAFT and suddenly find yourself with a homemade fiberglass body in the garage, we'll now tell you how to mount the thing on a chassis.

There are several types of body mounts used, the most common of which is a piece of angle or "T" iron laminated to the inside of the body with glass cloth and resin in a position which will make it easy to fasten to the frame or an outrigger from the frame. Another method often used is to laminate light strap iron inside the body so that holes may be drilled through both the glass and the strap iron for mounting purposes.

Around body openings such as the hood, grille, deck, cockpit, doors and other similar



Splash panels and braces in this glass body are pieces of light plywood which have been shaped and laminated in place.

Closeup of splash panel behind wheel reveals how it is laminated to body and glassed over to prevent wood splintering.

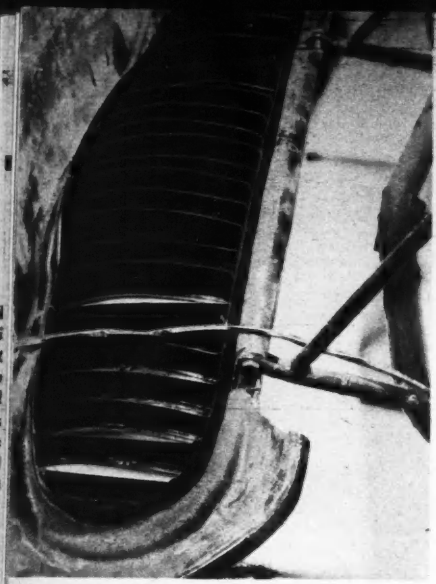
FIBERGLASS CAR

instances, small, lightweight tubing makes a sturdy body stiffener as well as a means of something to anchor to. Probably the most frequently used and cheapest tubing for such an application is ½ inch thinwall electrical tubing. This tube is available in ten foot lengths, is lightweight and easily formed to fit the inside of the body.

Wheel wells are a must in any car to stop water, rocks, etc., which have been picked up by the tires from ricocheting around the interior of the body. There are several ways to make these, they may be laminated of fiberglass, plywood may be cut to the proper shape and laminated to the body or they may be fashioned from light sheet metal or aluminum. Your choice in this matter can probably be greatly influenced by the price of the material used and whether you intend to go all out to save weight.

Doors and their openings must be strengthened by use of either plywood or tubing laminated to the fiberglass. This is one spot on the body where beef should not be sacrificed to save weight. Unless the body

Air scoops or engine compartment vents like this one can be formed of sheet metal and then laminated into place inside body.



Tubing was formed around grille opening and laminated to inside of body. Hinges allow front body section to be raised up.

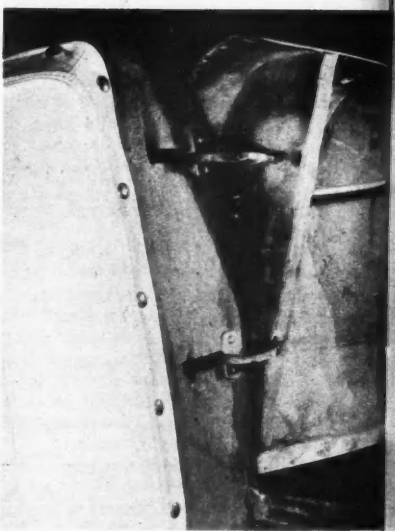
around the door is supported firmly and the door itself rigid, there will be a poor fit between the two and the side of the body will flex badly.

The precaution mentioned above about doors also holds true on openings such as the engine compartment hatch and the deck lid. The opening must be supported and once again, this is where the light electrical tubing comes in handy. Tubing may be formed around the opening on the inside of the body and then laminated to the body interior with glass cloth and resin. As for the engine hatch itself, tubing or laminated stiffeners will hold the hatch in the proper shape.

Never attempt to fasten anything to a fiberglass body without making sure that there is a solid support behind the glass. The support can be strap iron, angle iron or even a block of wood laminated to the body but if a hole is merely drilled through a glass body and something bolted to the body, the body will either split and crack away from the hole or the bolt head will wear through with road vibrations.

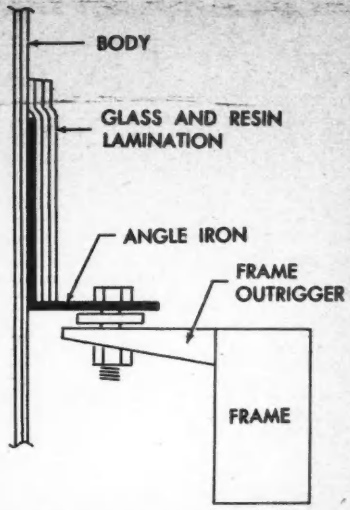
There are several other phases of mounting the body which will arise as you get deeper into the project but all of these can be solved by applying the methods used in the above paragraphs. Never leave a raw unsupported edge on the glass body and you won't have trouble with ripping and tearing.

Next month, we are going to polish off the Fiberglass series with a pictorial listing of as many of the commercially available bodies as we can find. Since we've started this series, we've received many letters from readers who have "got the bug" from CAR CRAFT and want to own a fiberglass car but would rather eliminate the body building time involved so that they can get down to



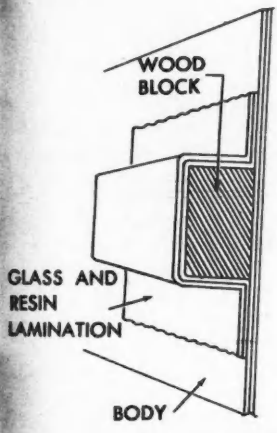
Stiffeners were cut from wood and laminated into door and next to door to provide support for both door and hinges.

View inside rear wheel well discloses how tubing was formed to give support to thin body shell, fastened with glass and resin.



When it is necessary to fasten something to a glass body, backing must be used. A block of wood laminated inside works fine.

Lock for hinged body section is bolted to small angle iron on top and bottom part fastens through strap iron in body panel.

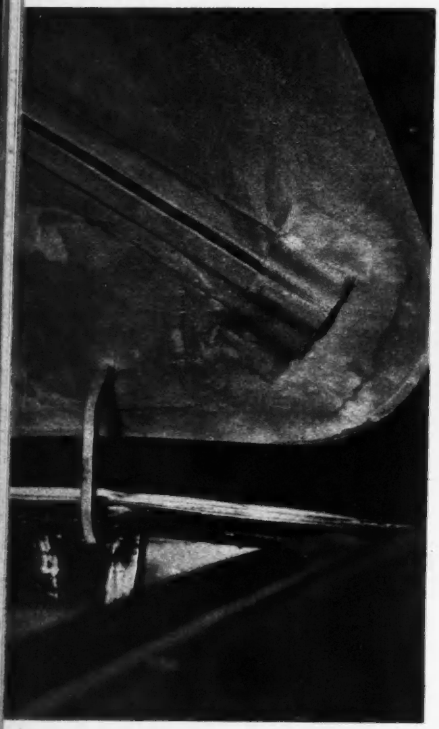


Short section of large angle iron can be laminated inside body in convenient positions for mounting body to the frame.

FIBERGLASS
CONTINUED

the actual chassis construction. For those of you who do want to build the body, check with us next month and see if you might come up with some design ideas plus handy hints on items such as windshields, tops and other important necessities.

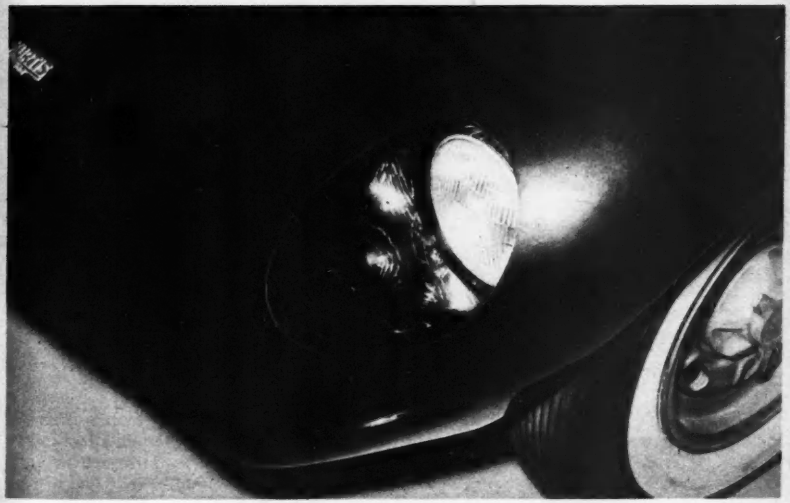
Bracket needed for exhaust system has firm support through small hole in body.



Three legged stiffener was molded then laminated inside flat area of deck lid.

Hinge for rear deck lid was formed of square stock, laminated to body and lid.

Recessed headlight well was made as individual piece with sheet metal flange and adjustment ring inside, then whole unit was fastened to body with glass cloth and resin.



Finished view of front light recess. The taillights and other parts on the body can be treated in this manner also but remember that support is needed around all openings.

"What's Your Problem?"

By Ray Brock

LATE FORD TO EARLY TRANSMISSION

Dear Ray:

I have a 1940 Ford in which I want to install a 1949 Ford engine. Will the engine fit without having to change the transmission or clutch plate?

Yours truly,
Richard Hlavinka
McLaughlin, South Dakota

You will need a '49 to '51 Mercury bell housing and clutch plate to do the job. The '49-'51 Mercs used a transmission like the early Fords while the '49 and later Fords used a smaller box with a main drive gear having a smaller spline.

FLATHEAD CADILLAC

Dear Ray:

I own a 1939 Cadillac flathead V8 which is in good condition. As much as I know about it is that it has a 346 cubic inch block and develops 135 horsepower. Bore and stroke 3½" x 4½".

I would like to know whether or not it would be worth the time and expense to modify it, and what must be done to it. Can I get speed equipment for it?

Sincerely,
Bob Zimmerman
Bradford, Pa.

We don't know of any available speed equipment for this engine. Modifying on this type engine is a thing of the past due to parts scarcities. It would be less expensive and more rewarding in horsepower to get a later overhead valve Cadillac. The OHV engine will also weigh in at a couple of hundred pounds less.

EARLY FORD OVERDRIVE

Dear Ray:

I have a 1941 Ford pickup. I have installed a '48 Mercury engine with adjustable tappets, ¾ cam, light flywheel, rear end from a '40 Ford passenger car.

Now I would like to know how much trouble I would have putting a '49 Mercury transmission (with overdrive) in my truck? Would I have too umch drive shaft trouble?

Thank you,
Doyle McJunkin
South Gate, Calif.

We have seen a couple of early Ford torque tube drive shafts converted to open drive lines and everything seems to work fine. The rear radius rods are retained and fastened to a new cross member by means of a ball socket like the front wishbone anchor. These radius rods should be beefed up to handle the torque and braking action. A machined adaptor is used on the rear end to hold an oil seal and the pinion shaft is machined to accept a U-joint flange. With this arrangement, an open drive line may be used and the Merc trans may be used with overdrive.

OLDS — DEUCE

Dear Ray:

I have a '32 Ford which I want to build into a street roadster. When I came to the problem of putting an engine in, I decided on a '53 Oldsmobile. I would like to have a stick shift in it.

Would you please set me straight on what would be a good transmission and rear end at an economical price?

Yours truly,
David A. Kelley
Kansas City, Kansas

When you say economical, that automatically means use the Ford trans and rear end with an adaptor between the Olds engine and the Ford transmission. If you desire a stronger gear box, look through your back issues to Jan. '55 Car Craft for a story titled "Big Gears For Big Engines". This will explain how to adapt a Cad box to a Ford torque tube. The Cadillac box in turn will bolt to an Olds engine with the proper bell housing. If you don't have this issue, send 25c to Car Craft, Back Issues Dept., we'll send it to you.

ROCHESTER ON CHEVY V8

Dear Ray:

I missed the August '55 issue of "Car Craft" and therefore the article on the carburetor swap. However, I caught the November '55 issue and started getting nervous when I read the article, "Versatile Rochester." I'm driving a '55 Chevy sport coupe V8 with Power Glide and power pack, thus—"nervous," after reading this article.

After a little research on my Carter and the Cad Rochester I bought the necessary

gaskets, the '55 Cad Rochester carburetor #7007970 and made an adaptor plate 3/8" thick to mount the Cad Rochester on my manifold. The throttle-body and manifold openings matched fine, the air cleaner (Chevy) fit the Rochester carb almost perfect, the only necessary changes were in throttle-linkage, plus reshaping of the automatic vacuum advance and thermostatic choke lines to fit. Here's my problem.

The car was running real good before I pulled the "swap" and after the swap, I found no noticeable difference of any kind.

If my arithmetic is correct, there's a gain of .62 square inches of venturi area. I may be wrong but I feel that this should show at least a slight change for the better.

Maybe you have an answer or two that I haven't come up with. Hope you can help me.

Frank Fiore
Chicago, Ill.

With the factory "power pack" four throat carburetor, chances are that you have plenty of carburetion for the 265 cubic inch stock Chevrolet at low and medium engine speeds. Multiple carburetion tests have shown that the stock Chevy engine can use more carburetion than the factory quad but the horsepower increase isn't noticeable until higher rpm's. You do not state just how you made before and after tests on your car but chances are that an increase might be noticed on a chassis dyno above 4000 rpm.

NEW CADILLAC HORSES

Dear Ray:

I own a 1952-62 Cadillac in which I would like to install a 1955 engine and transmission assembly. Can this be done by using 1952 mounting brackets? The agency states that the front frame would have to be modified which would be costly due ot different mounting bracket positioning. All of the comparisons I have made do not indicate the need of a frame change. I would like to know what I am up against before ordering an engine.

Don W. Dickman
Lincoln, Nebraska

The '55 engine should fit the '52 chassis perfectly if the '52 engine mounts are used. There is a difference in angles between the '52 and '55 mounts but the block dimensions are the same and the early mounts will bolt to the block perfectly. Everything else should fit without interference.

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RING IT continued from page 19

an old ring makes an excellent groove scraper if you don't happen to have a factory type handy. Take a close look at those grooves and make sure that they are clean. Believe it or not, we have heard of new rings and expanders being installed on top of old expanders which were stuck in ring grooves.

Clean each piston thoroughly, this includes a session with a wire brush and scraper plus using a drill bit of the proper size to remove all carbon and sludge from the oil return holes in the oil ring groove. Follow up with the solvent bucket and the pistons should then be ready for new rings.

Preparing the block and measuring wear with inside micrometers or a taper gauge should be the next step. There are several recommendations governed by the type engine being worked on and the specifications of the ring manufacturer as to when an engine can simply be fitted with new rings and when it has reached the point of no return and needs a rebore. A general consensus is that more than .012 wear and the engine could use a rebore.

Assuming your engine can be safely ringed, the next step is to "bust" the glaze. Although the cylinder walls look nice and shiny, they are not suitable for use with a new set of rings. If they are left as is, the rings will not break in or "seat" because the walls are too smooth and coated with varnish. If the walls are roughened up to remove the varnish deposits, the new rings can seat properly, that is unless you get carried away with the roughing up process. If the walls are too rough, the rings are worn down too much during the break-in period and lots of valuable engine miles are lost.

The proper finish is obtained by working a fine grit cylinder hone rapidly up and down in the cylinder until the varnish deposits are removed and a clean looking cross-hatch pattern remains on the walls. The scratches on this cross-hatch pattern are just right when they are plainly visible to the eye but not deep enough to be felt when you scrape them with your fingernail. With each cylinder prepared in this manner, the wall scratches will provide the necessary abrasion to "seat" the new rings and also hold enough oil to insure proper break-in lubrication.

After the honing operation, the cylinder bores should be thoroughly cleansed to remove all grit which if left in the engine, would increase engine wear. Solvents or gasoline do not effectively remove all of the hone grit and the only way to make sure that the bores are clean is to use hot, soapy water with a stiff brush and lots of arm work. After the soap treatment, hot, clear water should be used to rinse the engine. Follow the clear water with a clean, oily rag to stop rusting action.

Now, the new rings. Don't rely completely upon the size printed on the outside of the box. Check the rings in their proper grooves to make sure that they are correct for the groove depth, check the width of the ring against the groove width and check the ring end clearance in the cylinder bore. (All of the clearances mentioned vary with the engine, so they should be checked in a Motor repair manual.) Take a new ring and insert it in the empty cylinder, use a piston to push the ring down to the bottom limit of its normal travel and then check the gap between the ends with a feeler gauge. If the gap is less than the recommended minimum, the ends should be filed to provide clearance as needed.

When installing the new rings on the piston, start with the bottom (oil) ring. First, the expander with the gap on the side of the piston opposite the camshaft, then the oil ring with the gap toward the cam. Stagger the gap on the compression rings so that the rings are evenly spaced. Don't try to spread the rings too far when placing them on the piston or they will break and also make sure that any identifying marks on the rings are checked against printed instructions in the box. There is a top side to the upper compression ring (and sometimes other rings) which must be placed in the proper position or the ring will not hold compression.

After all rings are in place, dip the tip of the piston and rings in clean oil and squeeze the rings into the grooves with a ring compressor. Check the number stamped on the rod to make sure that the piston is returned to the proper hole, place any arrow or F mark on the top of the piston to the front of the engine and then push the piston from the ring compressor into the cylinder with the end of a wooden hammer handle.

With the crank throw of the cylinder being worked on in the extreme bottom position, the rod with insert in position should be pulled down into place over the throw and the rod cap slipped on so that the num-

ber on both rod and cap are together. Put the rod nuts on and torque evenly to the specified tension. (Check in Motor manual) if the rod nuts are tightened too much, the bolts may stretch and fracture causing a break at a later date. If too loose, they might come off.

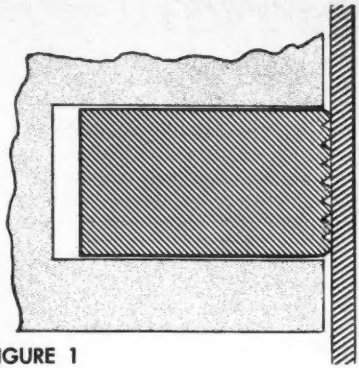

FIGURE 1

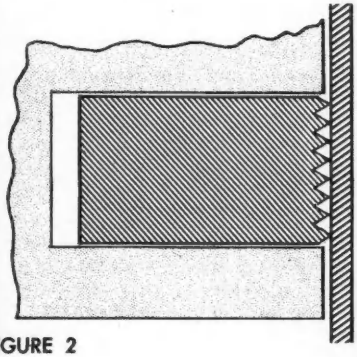

FIGURE 2

Just because you have new rings in your engine, don't think that the job is all over. One of the most important steps of a ring job is the break-in period. Grant engineers recommend that a non-detergent, non-paraffin base oil be used for the first 500 miles. This type oil is subject to a corrosive action and hastens the break-in. After 500 or 1,000 miles, drain and refill with a good grade detergent oil using the car manufacturer's recommendation as to weight.

(continued on page 64)

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Address _____

City _____ State _____

CONTINUED FROM PAGE 27

music around radios. Anything that can't be obtained any other way."

"I've noticed this bloodshot eyeball with wings. It's a sort of a Von Dutch trade mark isn't it?"

"Yeah, I guess so. But what it means I can't remember. The first one I drew was way back in 1947 and I haven't any idea what prompted me to even draw it then."

"I notice that on some of your jobs you paint little saying or quotations."

"You mean like 'Too much', or 'Might As Well Commit Suicide', or 'Humanity Is Tragic', is that what you mean?"

"Yeah, any significance?"

"Sometimes, like 'His Taillight Is In The Way'. It was too! Some of the things I write on the cars are as confusing as my drawings."

"What's the average age of your customers would you say?"

"About six Martian years."

"When a guy comes for his custom after you have striped it, what kind of a reaction do you usually get?"

"Usually pretty good."

"What do you tell a guy who beefs about the way you painted his car?"

"_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ !"

"Ever get tired of striping cars?"

"Heck yes. I'm good for about a year at a time at this then I go back to my regular job."

"Your regular job?"

"I'm a sign writer and a gunsmith by trade. I do action modifications and recaliber guns. I also make metal engravings on shot guns and that sort of thing."

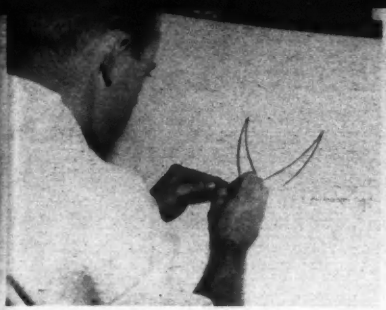
"Well Dutch, I guess that about does it. Sure appreciate your help. Thanks for answering all of my questions."

"Sure thing. What did you say your name was again?"

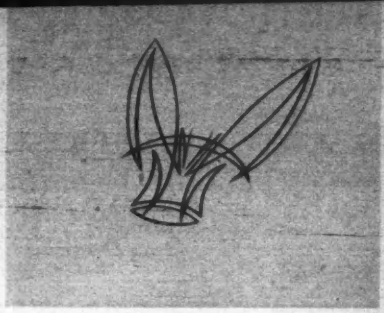
"Baldwin. You know like pianos, apples, and locomotives."

"Aw sure. Well bye now. It's sure been nice knowing you Mr. Jonathon."

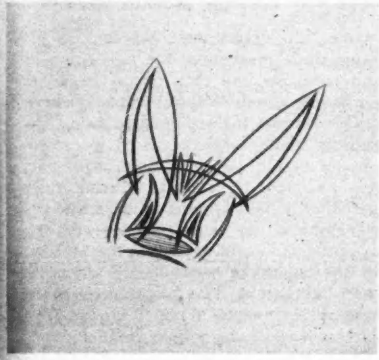
***EDITOR'S NOTE:** Those of you who wish to write to Von Dutch can do so by writing: Competition Body Shop, 7201 West Beverly Boulevard, Los Angeles, California*



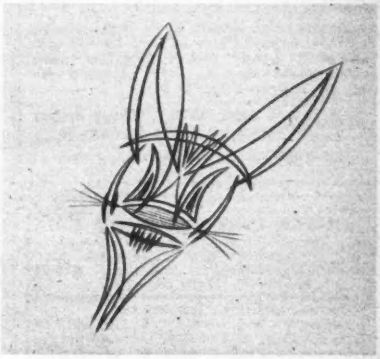
1. Now, let's watch the master create one of his own specialties — "The Rabbit."



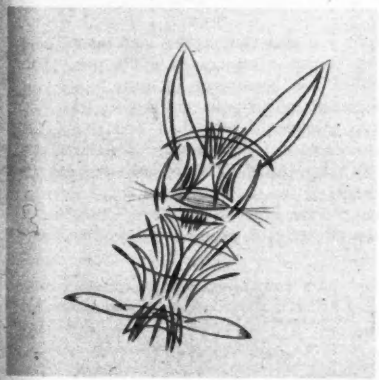
2. First, a few basic lines to establish what end we're working on — "the face."



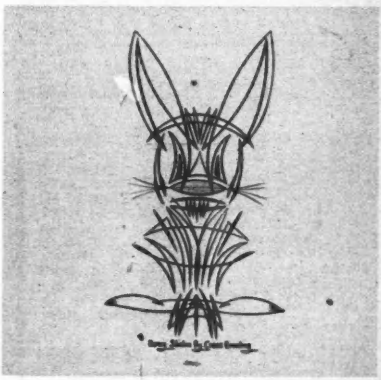
3. After a few short strokes of the brush, things start taking shape — "the eyes."



4. After the whiskers comes the buck teeth. Drawing is completely free-hand.



5. Now we get the treatment for the body, then comes the rabbit's foot anatomy.



6. Finished rabbit, thoughtfully titled, "Harvey — shaken by cross-breeding."

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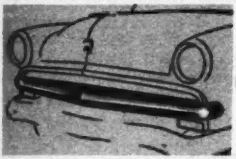

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RING IT

continued from page 61

One way to ruin a ring job is to baby a car at low engine speeds during the break-in period. Most modern fuels create varnish which will quickly coat the newly honed cylinder walls unless enough piston speed is employed to quickly mate the new rings with the cylinders. The sealing edge of the ring has a lathe turned finish which under a microscope, looks like threads on a bolt (see figure 1). This thread is calculated to wear down to a certain depth (figure 2) during the break-in and then be capable of holding a good seal while not creating excess pressure on the walls.

Grant discourages any "babying" of the engine while breaking-in the new rings, instead recommending that the car be driven at highway speeds (50-60) mph whenever possible for two or three hundred miles. This relatively short break-in period is usually sufficient to seal cast iron rings, with more miles necessary for steel or chrome rings. Another important factor is to make sure that the engine is not being operated too cold. For break-ins in cold weather, it is mandatory that the engine be warm enough to insure proper lubrication. This might necessitate a change in thermostats to one of around 180°, which is actually the proper range for most driving anyway.

For engines to be used in race cars, Grant has found that their rings seat very quickly if the fresh engine is run at slow idle periods for a while in the garage, a few slow laps made and then on to the high speed runs with engine rpms up to 6000 rpm. This method has been used successfully by mechanics at Indianapolis and other tracks.

As a synopsis, we might boil the whole story down to a few short facts. Remove the wear ridge, install rings properly, prepare the cylinder to the right degree of roughness and then use the break-in procedure described. It pays off and you will be satisfied with the results.

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BENCH RACIN'

continued

a passenger car. Sandbags in the trunk for ballast is not the answer because it adds to the total overall weight, although the location of the additional weight is much more advantageous over the rear wheels than it would be over the front wheels.

Most of the country's top drag cars use "slicks" on the driving wheels to obtain good traction coming out of the "hole." But these tires are seldom necessary after the first 150 feet or so. The fact is that they are so large and heavy that they react just like a pair of 30 inch diameter, 50 pound flywheels would be expected to. Their resistance to accelerative torque applied to the driving axles is a function of their weight and diameter; the larger the diameter, and therefore the weight, the greater the resistance to acceleration. Actually, both the elapsed time through the quarter-mile and top speed at the end would be measureably improved if it were possible to change tires during the run. So the true value of "slicks" at the drag strip is, in most cases, reduced to solving traction problems when getting under way. Once under way, they are no longer necessary, in fact, they are more of a hindrance than a help.

However, there are a very few excellent drag machines that get first-class results by using smaller and lighter passenger car tires, although the area of ground contact may approach that of a large "slick." This practice is definitely on the right track and in these cases, the problem of standing starts is overcome by careful gearing in the transmission and rear end, along with tires made from the softer natural rubber and synthetic compounds with effective tread patterns.

Applying this line of reasoning to a modified passenger car, we will, in all probability, end up with rear tires that are relatively wide but of small diameter, a good tread pattern and made from soft materials. By intelligent-gearing and tire selection, we can obtain a good "bite" at low speeds without any sacrifice in top-end performance. Look in your rear-view mirror. Is your horsepower going up in smoke? If it is, it's time to "re-tire."

CARQUIZ ANSWERS

(see page 66)

1. '55 Chevrolet
2. '51 Mercury
3. '53 Mercury
4. '53 Willys
5. '52 Ford
6. '55 Oldsmobile

NEW USED O.H.V. MOTORS ADAPTORS

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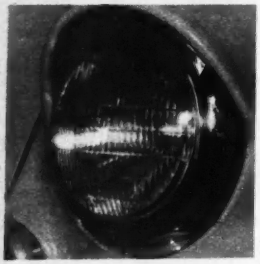
CAR QUIZ

Test your car skill — identify each of these components. Each pictured component should be correctly matched with the year and make car that it is from. Score 15 points for each correct answer. A total score of 45 is passing, 60 fair, 75 good, 90 excellent.



1.

( )
'55 Cadillac
( )
'55 Chevrolet
( )
'55 Oldsmobile

This style headlight rim is very popular with customizers.

2.

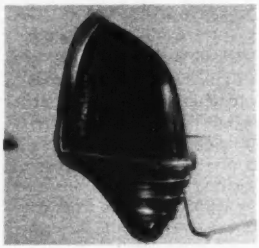
( )
'52 Chevrolet
( )
'51 DeSoto
( )
'51 Mercury

This item is generally discarded when this model is customized.

3.

( )
'53 Mercury
( )
'53 Ford
( )
'55 Dodge

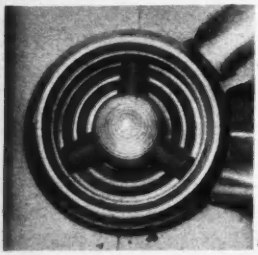
You've seen these trim pieces used many times in airscoops.



4.

( )
'51 Cadillac
( )
'53 Willys
( )
'51 Plymouth

This component has great possibilities for taillight customizing.



5.

( )
'53 Chevrolet
( )
'52 Ford
( )
'51 Studebaker

This item is often used for end pieces on "floating" grille bars.

6.

( )
'53 Plymouth
( )
'54 Chrysler
( )
'55 Oldsmobile

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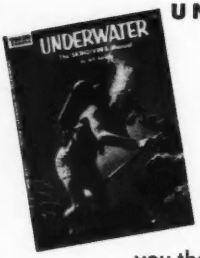

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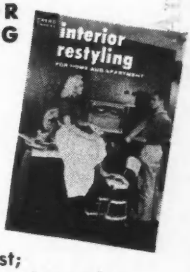

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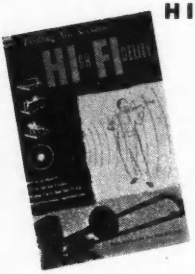

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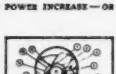
17 pt. Plug shows 11% fuel saving in stock American automobile!

New electrode system still fires clean, hot and steady past 50,000 car miles! You may now order a set of these remarkable LIFE-TIME spark plugs from this advertisement . . .

50,000 CAR MILES! Before LIFE-TIME development, the spark plug was the most often replaced part of your car. Engineers agreed that "creeping paralysis," gradual electrode disintegration, carbon buildup, widening gap, burning, blistering, insulator failure could waste one gallon in ten. The LIFE-TIME plug goes far beyond the life of the average set of tires, the average battery, firing clean, hot and steady at 50,000 car miles! Most spectacular spark plug research breakthrough in 50 years allows unprecedented warranty. WE GUARANTEE GREATER GAS MILEAGE—GREATER ACCELERATION—A MAJOR POWER INCREASE—OR YOUR MONEY BACK.

HOW IT PT. FIRING WORKS Note electrodes closely. A circular arcing area (four concave segments). Gap being the same from all points. Electricity has property of arcing from coldest point. Current also arcs more readily from apex of two planes than from face of a flat, metallic surface. Note that there are 16 apexes (where two planes meet) — all the same distance from the center electrode.



SPARK ROTATES AROUND CIRCLE. Normal heat and spark erosion are spread around the entire 360 degrees and around the whole circumference of the center electrode.

PLATONIUM-NICKEL ALLOY ELECTRODES— Metallurgists' first major step beyond platinum aircraft plug electrodes. Arcing points of this material have continued to function after the equivalent of 120,000 car-miles.

SPECIAL SINTERED CORUNDUM INSULATOR— Made of gem-like mineral which conducts heat 20 times better than ordinary porcelain. Special shape (seen beneath electrodes) is designed to vaporize and exhaust wet carbon and oil.

INDIVIDUAL INSPECTION— Each LIFE-TIME Spark Plug is tested for firing in oil and for resistance to 30,000 volts/CM.

PERMANENT GAP— After months of use, LIFE-TIME Spark Plugs mike at exact factory pre-gap.

SELF-CLEANING FOR LIFE— Confined gases exploding in chamber formed by multiple electrodes reclean arcing surfaces with each firing stroke.

"THANKS FOR YOUR WONDERFUL LETTERS" The real test of a spark plug is "What will it do in my own car?" Take the above dynamometer test on a 1951 Buick Super. It shows an 8 horsepower gain with Life-Time 17-point plugs. That was a 12½% hp gain at 2000 RPM. You don't need a dynamometer with Life-Time Plugs. You can feel the difference both in your ride and your pocketbook. Try a set and let me hear from you about them. Many Thanks.

Frank Edmunds
Inventor of the LIFE-TIME Spark Plug

CONTINENTAL MFG. CORP., CULVER CITY, CALIF.

Tapered 18mm now made for late Ford products and others.

NOW ORDER REGISTERED SET FOR YOUR CAR AT POPULAR PRICE!

YOU'LL RECEIVE BY MAIL this registered set of LIFE-TIME Spark Plugs in proper series, heat range and gap) for the car you indicate in coupon. Now AVAILABLE FOR AMERICAN & EUROPEAN PASSENGER CARS, TRUCKS, BOATS, FARM EQUIPMENT, INDUSTRIAL ENGINES.

DEALERS AND DISTRIBUTORS — The LIFE-TIME Spark Plug is now in full production. Write for full details. Distributors: Please inquire as to status of your territory.

LIFE-TIME Spark Plug Division
CONTINENTAL MANUFACTURING CORP.
Washington Blvd. at Motor Ave.,
Culver City 14, California

Gentlemen: Please mail postpaid ____set(s) (registered) of LIFE-TIME Spark Plugs in proper heat range and gap for my car at $1.19 per plug (set of six, $7.14, set of eight, $9.52). (Or send $2 per set, balance C.O.D.)
California residents add 3% tax.

Make of my car is_____year_____
Model_____No. cyl._____
I enclose $_____(check, cash or money order)
Name_____
Address_____
City_____Zone_____State_____

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